


STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

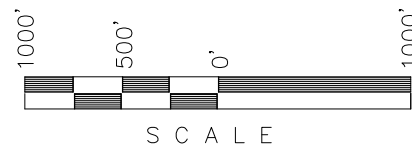
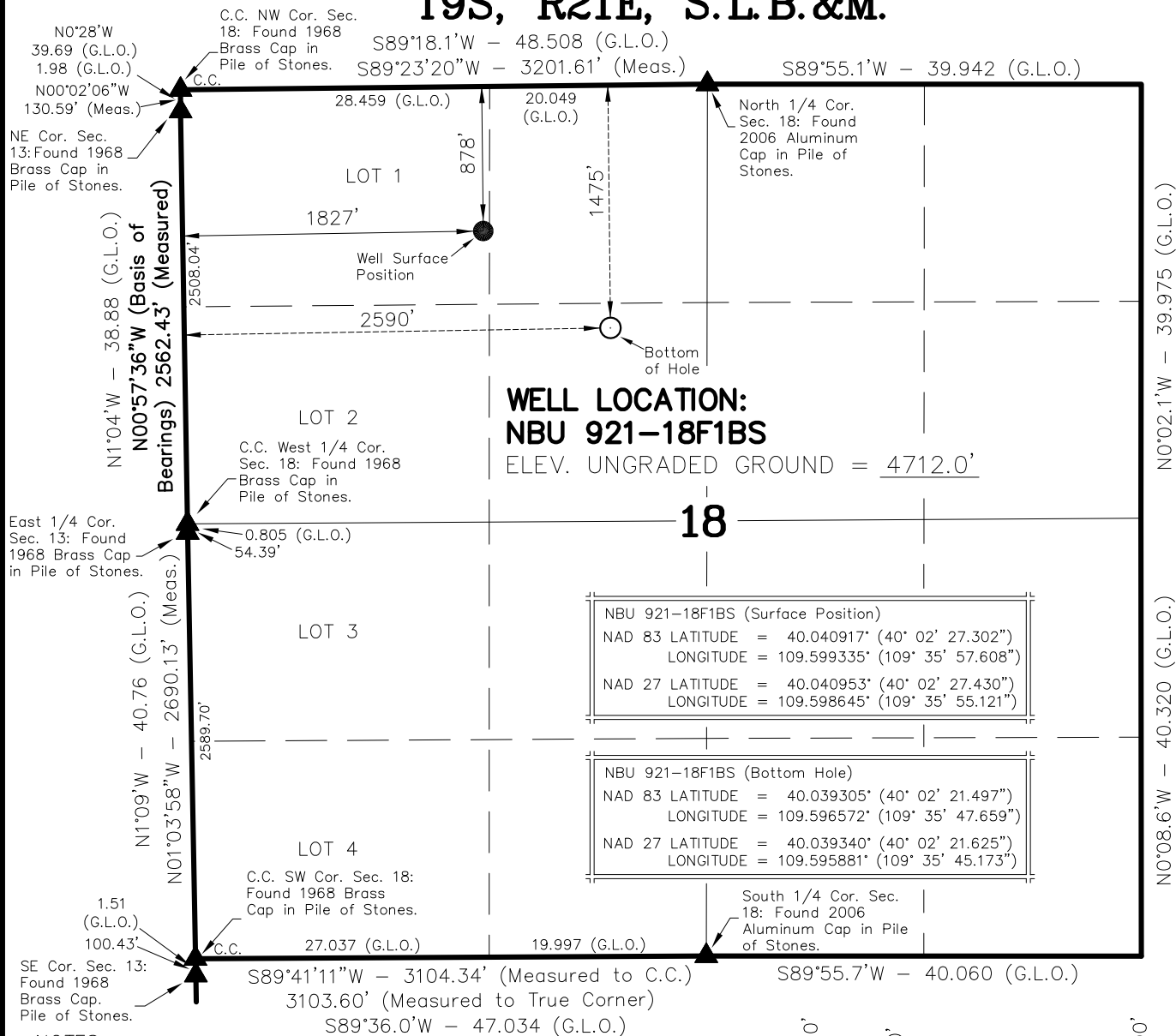
AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL				1. WELL NAME and NUMBER NBU 921-18F1BS		
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				3. FIELD OR WILDCAT NATURAL BUTTES		
4. TYPE OF WELL Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES		
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.				7. OPERATOR PHONE 720 929-6587		
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217				9. OPERATOR E-MAIL mary.mondragon@anadarko.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0581		11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
13. NAME OF SURFACE OWNER (if box 12 = 'fee')				14. SURFACE OWNER PHONE (if box 12 = 'fee')		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')				16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute Tribe		18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	878 FNL 1827 FWL	NWNW	18	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	1475 FNL 2590 FWL	SEnw	18	9.0 S	21.0 E	S
At Total Depth	1475 FNL 2590 FWL	SEnw	18	9.0 S	21.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 1475		23. NUMBER OF ACRES IN DRILLING UNIT 2399		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 495		26. PROPOSED DEPTH MD: 10711 TVD: 10540		
27. ELEVATION - GROUND LEVEL 4712		28. BOND NUMBER WYB000291		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496		
ATTACHMENTS						
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
NAME Danielle Piernot		TITLE Regulatory Analyst		PHONE 720 929-6156		
SIGNATURE		DATE 07/01/2009		EMAIL danielle.piernot@anadarko.com		
API NUMBER ASSIGNED 43047505340000		APPROVAL  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10711		
Pipe	Grade	Length	Weight			
	Grade P-110 LT&C	10711	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2685		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2685	36.0			

T9S, R21E, S.L.B.&M.



SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 362251
STATE OF UTAH

Kerr-McGee
Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 921-18F1BS
WELL PLAT
1475' FNL, 2590' FWL (Bottom Hole)
SE ¼ NW ¼ OF SECTION 18, T9S, R21E,
S.L.B.&M. UTAH COUNTY, UTAH.

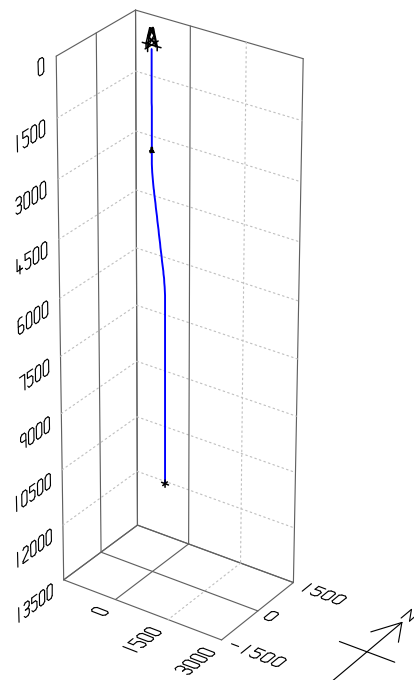
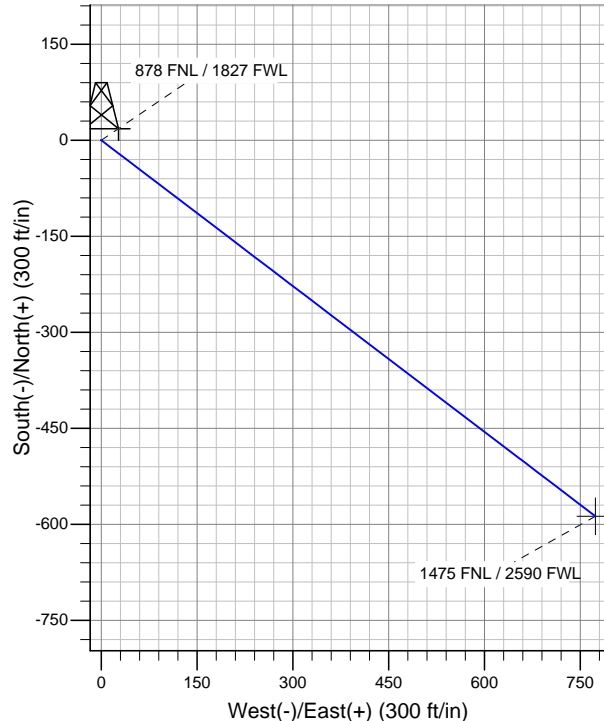
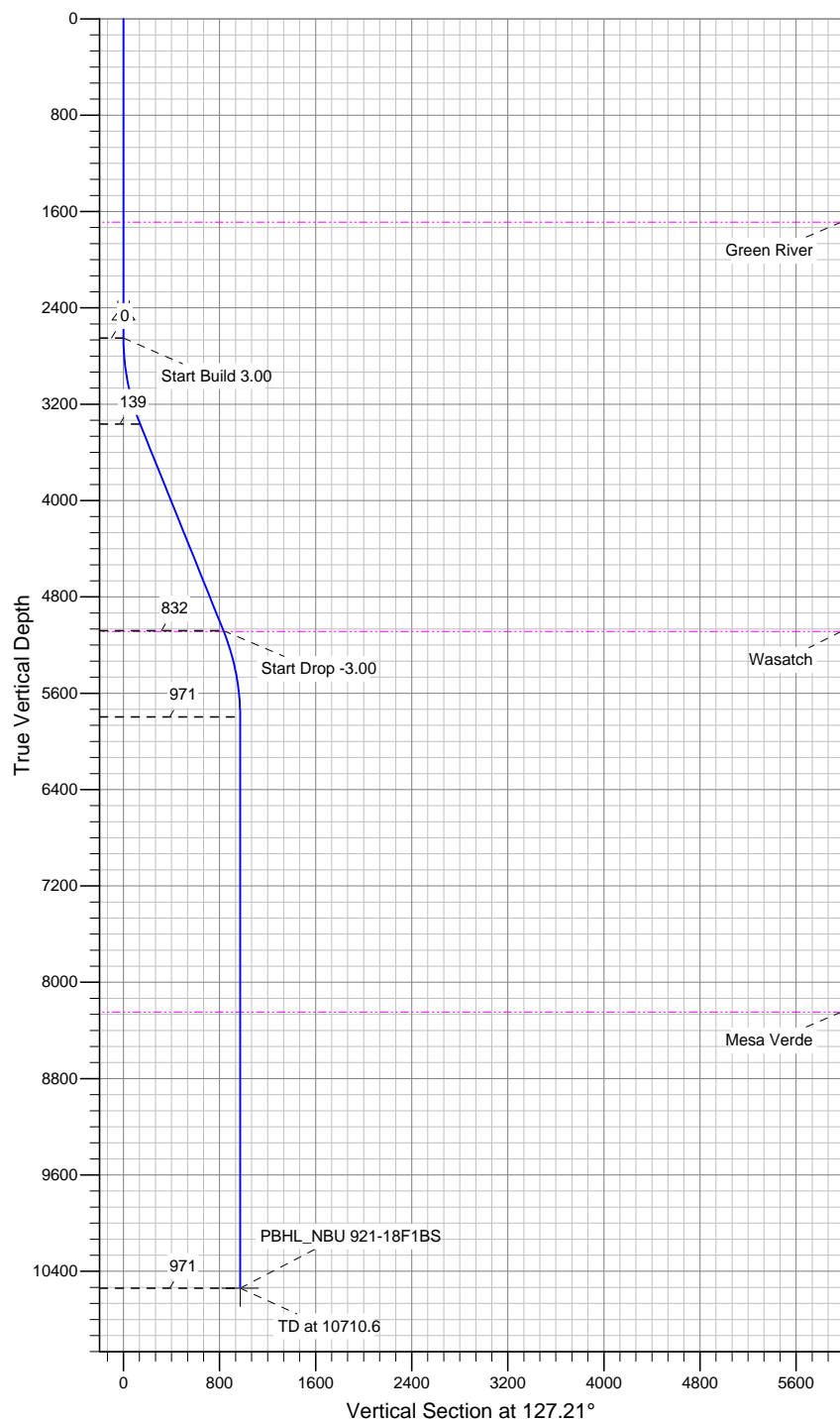
CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-09-09	SURVEYED BY: M.S.B.	SHEET 3 OF 13
DATE DRAWN: 01-14-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 04-16-09	

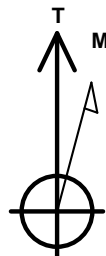


Well Name: P_NBU 921-18F1BS
 Surface Location: UINTAH_NBU 921-18D PAD
 NAD 1927 (NADCON CONUS) Universal Transverse Mercator (US Survey Feet)
 UTAH - UTM (feet), NAD27, Zone 12N
 Ground Elevation: 4711.0
 Northing 14544043.01 Easting 2032650.05 Latitude 40.040953°N Longitude 109.598645°W



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2650.0	0.00	0.00	2650.0	0.0	0.0	0.00	0.00	0.0
3	3383.3	22.00	127.21	3365.4	-84.1	110.8	3.00	127.21	139.1
4	5234.2	22.00	127.21	5081.6	-503.4	663.0	0.00	0.00	832.4
5	5967.6	0.00	0.00	5797.0	-587.4	773.8	3.00	180.00	971.5
6	10710.6	0.00	0.00	10540.0	-587.4	773.8	0.00	0.00	971.5



Azimuths to True North
 Magnetic North: 11.37°

Magnetic Field
 Strength: 52569.5snT
 Dip Angle: 65.94°
 Date: 6/2/2009
 Model: IGRF200510

ROCKIES - PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

UINTAH_NBU 921-18D PAD

P_NBU 921-18F1BS

P_NBU 921-18F1BS

Plan: Plan #1 06-02-09 ZJRA6

Standard Planning Report - Geographic

02 June, 2009

APC

Planning Report - Geographic

Database:	apc_edmp	Local Co-ordinate Reference:	Well P_NBU 921-18F1BS
Company:	ROCKIES - PLANNING	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	UINTAH_NBU 921-18D PAD	North Reference:	True
Well:	P_NBU 921-18F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-18F1BS		
Design:	Plan #1 06-02-09 ZJRA6		

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site		UINTAH_NBU 921-18D PAD				
Site Position:		Northing:	14,544,048.05ft	Latitude:	40.040966°N	
From:	Lat/Long	Easting:	2,032,669.29ft	Longitude:	109.598576°W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.90 °

Well	P_NBU 921-18F1BS					
Well Position	+N/-S	0.0 ft	Northing:	14,544,043.01 ft	Latitude:	40.040953°N
	+E/-W	0.0 ft	Easting:	2,032,650.05 ft	Longitude:	109.598645°W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,711.0 ft

Wellbore	P_NBU 921-18F1BS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/2/2009	11.37	65.94	52,569

Design	Plan #1 06-02-09 ZJRA6				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	10,540.0	0.0	0.0	127.21	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,650.0	0.00	0.00	2,650.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,383.3	22.00	127.21	3,365.4	-84.1	110.8	3.00	3.00	0.00	127.21	
5,234.2	22.00	127.21	5,081.6	-503.4	663.0	0.00	0.00	0.00	0.00	
5,967.6	0.00	0.00	5,797.0	-587.4	773.8	3.00	-3.00	0.00	180.00	
10,710.6	0.00	0.00	10,540.0	-587.4	773.8	0.00	0.00	0.00	0.00	PBHL_NBU 921-18

APC

Planning Report - Geographic

Database:	apc_edmp	Local Co-ordinate Reference:	Well P_NBU 921-18F1BS
Company:	ROCKIES - PLANNING	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	UINTAH_NBU 921-18D PAD	North Reference:	True
Well:	P_NBU 921-18F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-18F1BS		
Design:	Plan #1 06-02-09 ZJRA6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	14,544,043.01	2,032,650.05	40.040953°N	109.598645°W
1,689.0	0.00	0.00	1,689.0	0.0	0.0	14,544,043.01	2,032,650.05	40.040953°N	109.598645°W
Green River									
2,500.0	0.00	0.00	2,500.0	0.0	0.0	14,544,043.01	2,032,650.05	40.040953°N	109.598645°W
Surface Casing									
2,650.0	0.00	0.00	2,650.0	0.0	0.0	14,544,043.01	2,032,650.05	40.040953°N	109.598645°W
3,383.3	22.00	127.21	3,365.4	-84.1	110.8	14,543,960.67	2,032,762.12	40.040722°N	109.598249°W
5,234.2	22.00	127.21	5,081.6	-503.4	663.0	14,543,550.15	2,033,320.90	40.039571°N	109.596277°W
5,240.1	21.82	127.21	5,087.0	-504.7	664.7	14,543,548.86	2,033,322.65	40.039567°N	109.596270°W
Wasatch									
5,967.6	0.00	0.00	5,797.0	-587.4	773.8	14,543,467.81	2,033,432.97	40.039340°N	109.595881°W
8,418.6	0.00	0.00	8,248.0	-587.4	773.8	14,543,467.81	2,033,432.97	40.039340°N	109.595881°W
Mesa Verde									
10,710.6	0.00	0.00	10,540.0	-587.4	773.8	14,543,467.81	2,033,432.97	40.039340°N	109.595881°W

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NBU 921-18F1	0.00	0.00	10,540.0	-587.4	773.8	14,543,467.81	2,033,432.97	40.039340°N	109.595881°W
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,500.0	2,500.0	Surface Casing	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,240.1	5,087.0	Wasatch		0.00	
1,689.0	1,689.0	Green River		0.00	
8,418.6	8,248.0	Mesa Verde		0.00	

NBU 921-18F1BS

Pad: NBU 921-18D

Surface: 878' FNL, 1,827' FWL (NW/4NW/4) Lot 1

BHL: 1,475' FNL 2,590' FWL (SE/4NW/4)

Sec. 18 T9S R21

Uintah, Utah

Mineral Lease: UTU 0581

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,689'	
Birds Nest	1,963'	Water
Mahogany	2,482'	Water
Wasatch	5,087'	Gas
Mesaverde	8,248'	Gas
MVU2	9,234'	Gas
MVL1	9,775'	Gas
TVD	10,540'	
TD	10,711'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program.

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program.

6. **Evaluation Program:**

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,711' TD, approximately equals 6,562 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 4,138 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

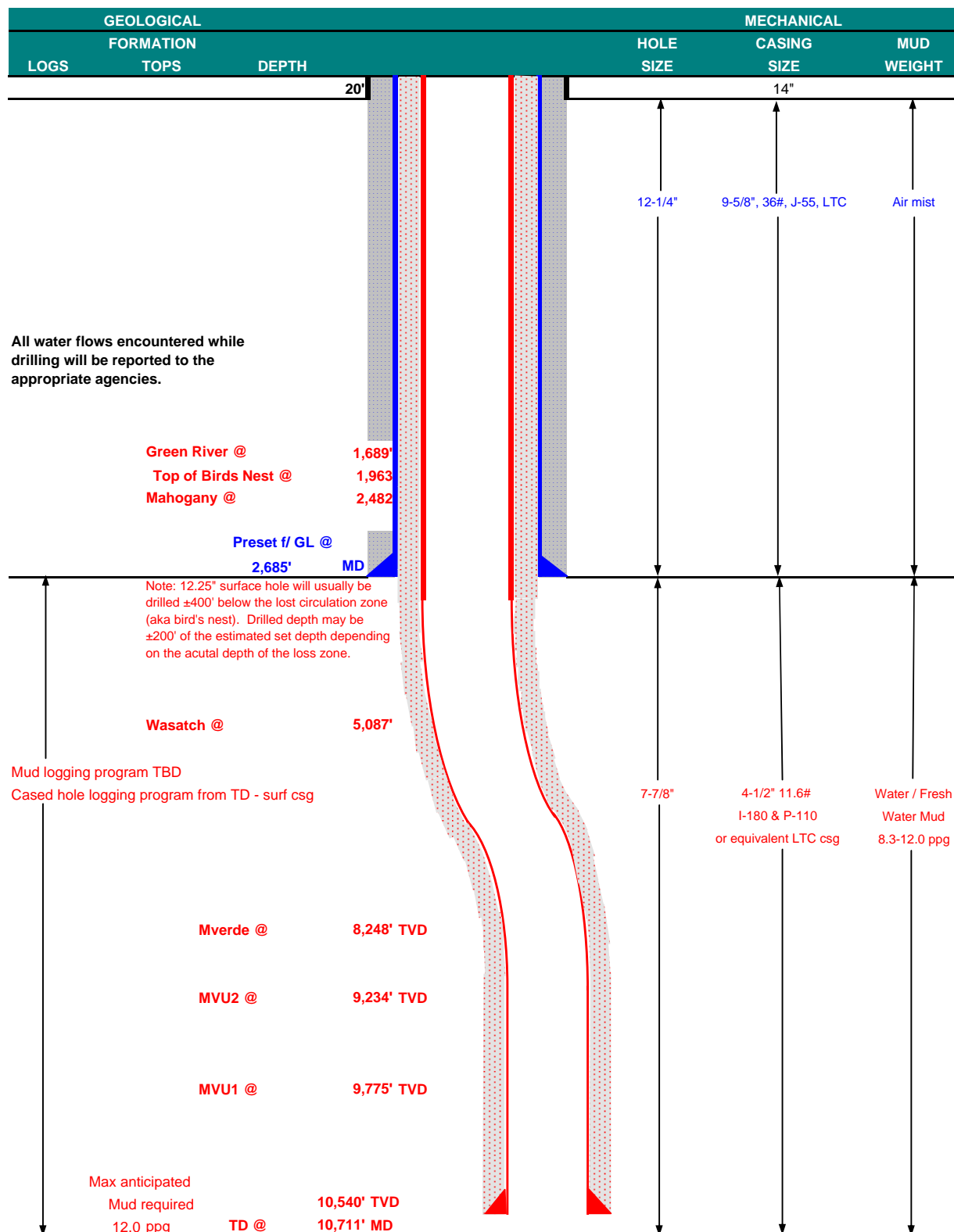
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	July 2, 2009		
WELL NAME	NBU 921-18F1BS					TD	10,540'	TVD	10,711' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		4,711'
SURFACE LOCATION	NW/4 NW/4 878' FNL		1,827' FWL		Sec 18	T 9S	R 21E	Lot 1	
	Latitude: 40.040917		Longitude: -109.599335		NAD 83				
BTM HOLE LOCATION	SE/4 NW/4 1,475' FNL		2,590' FWL		Sec 18	T 9S	R 21E		
	Latitude: 40.039305		Longitude: -109.596572		NAD 83				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Tribe (Surface), UDOGM Tri-County Health Dept.								





KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,685	36.00	J-55	LTC	0.81	1.61	5.96
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9,821	11.60	I-80	LTC	1.83	1.12	1.98
						10,690	8,650	279,000
	4-1/2"	9,821 to 10,711	11.60	HCP-110	LTC	54.60	1.32	33.09

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,138 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,562 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	2,185'	65/35 Poz + 6% Gel + 10 pps gilsonite	520	35%	12.60	1.81
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,581'	Premium Lite II + 3% KCl + 0.25 pps	440	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,130'	50/50 Poz/G + 10% salt + 2% gel	1,500	40%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

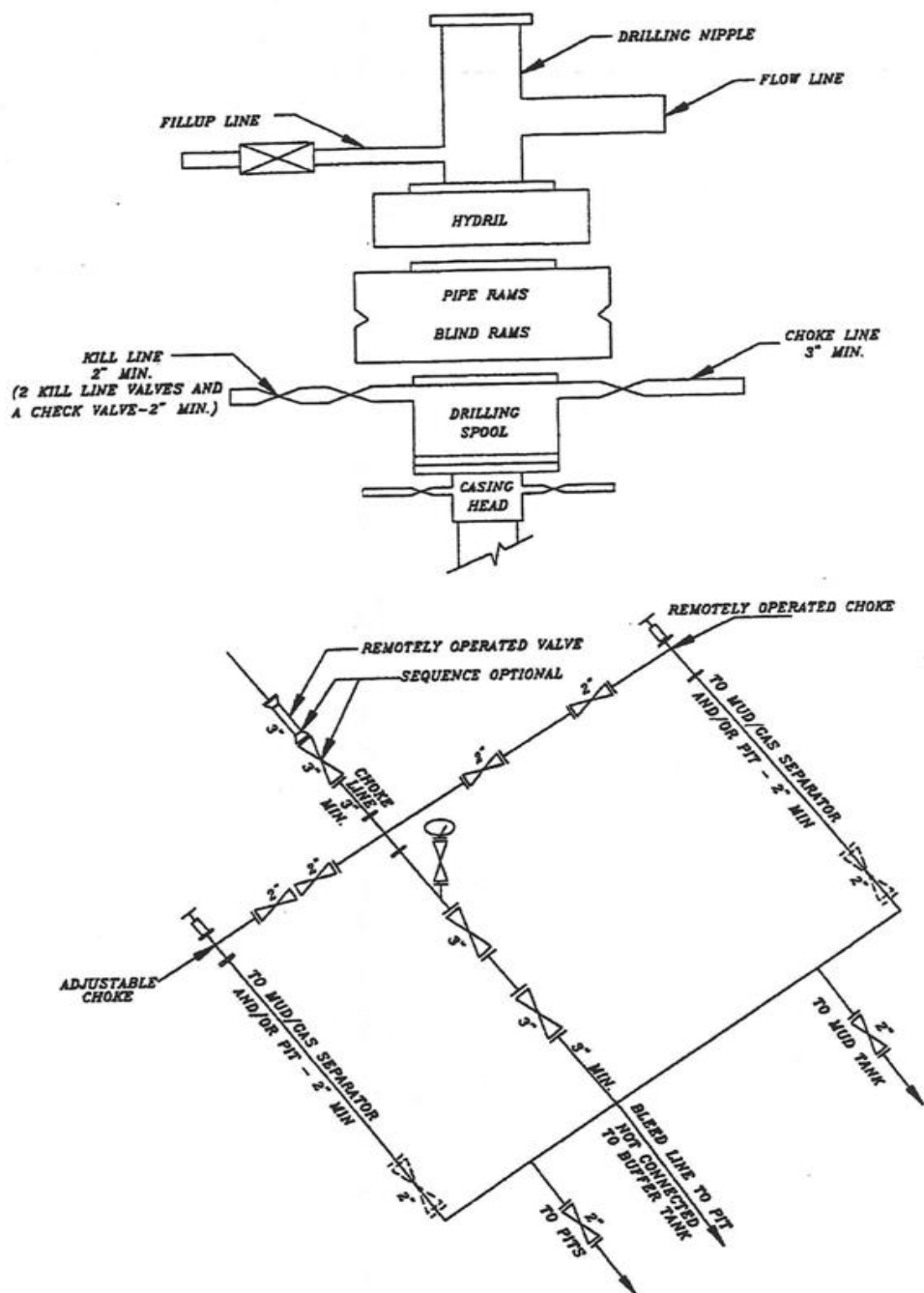
DATE:

DRILLING SUPERINTENDENT:

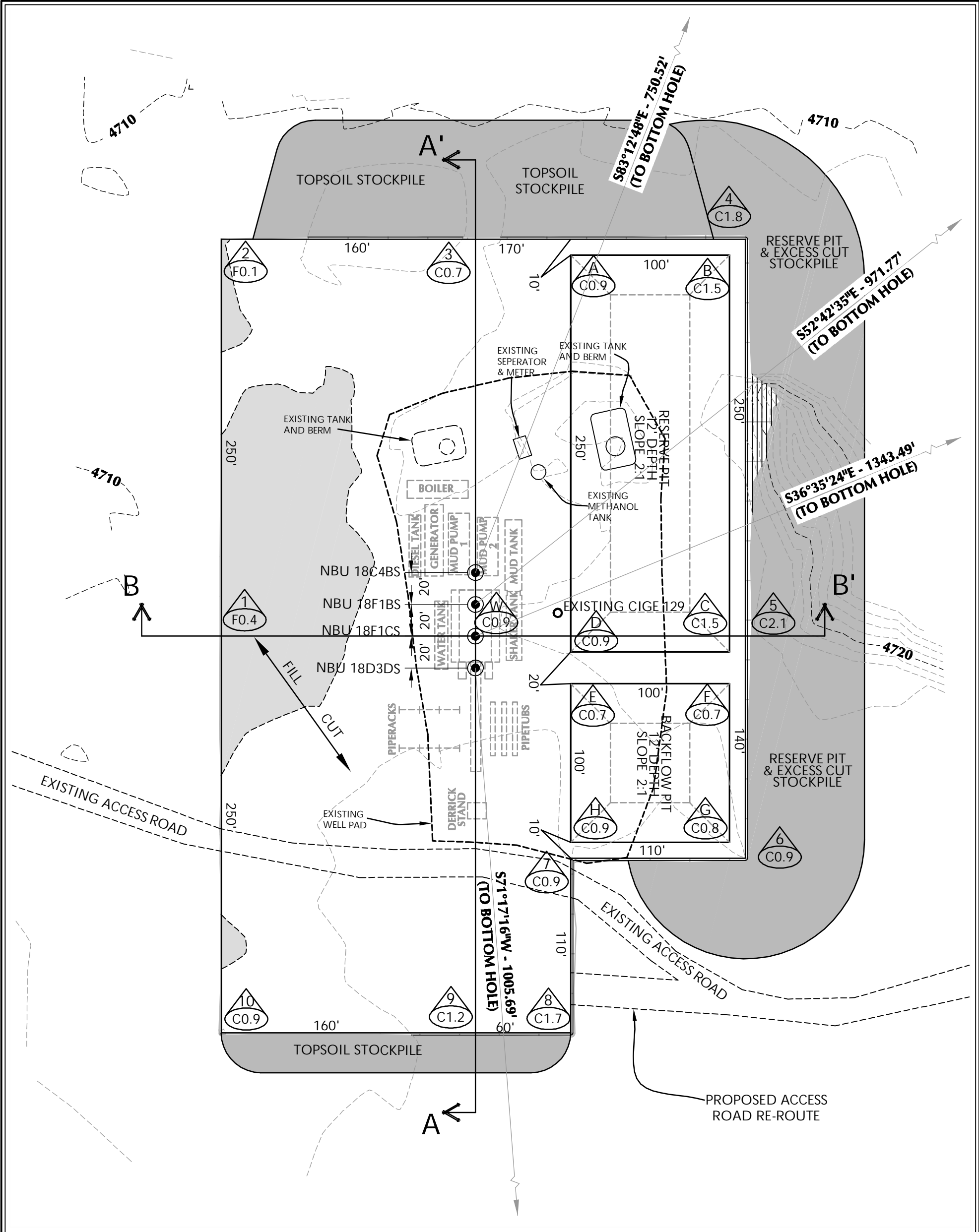
John Merkel / Lovel Young

DATE:

EXHIBIT A NBU 921-18F1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



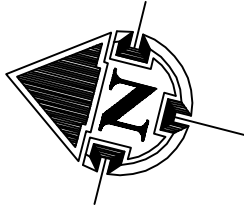
WELL PAD CIG 129 QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 4712.0'
FINISHED GRADE ELEVATION = 4711.1'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 3,608 C.Y.
TOTAL FILL FOR WELL PAD = 522 C.Y.
TOPSOIL @ 6" DEPTH = 2,043 C.Y.
EXCESS MATERIAL = 3,086 C.Y.
TOTAL DISTURBANCE = 3.60 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 28,730 BARRELS
RESERVE PIT VOLUME
+/- 7,720 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 9,490 BARRELS
BACKFLOW PIT VOLUME
+/- 2,660 CY

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)



HORIZONTAL 0 30 60 1" = 60'
2' CONTOURS

KERR-MCGEE OIL & GAS
ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

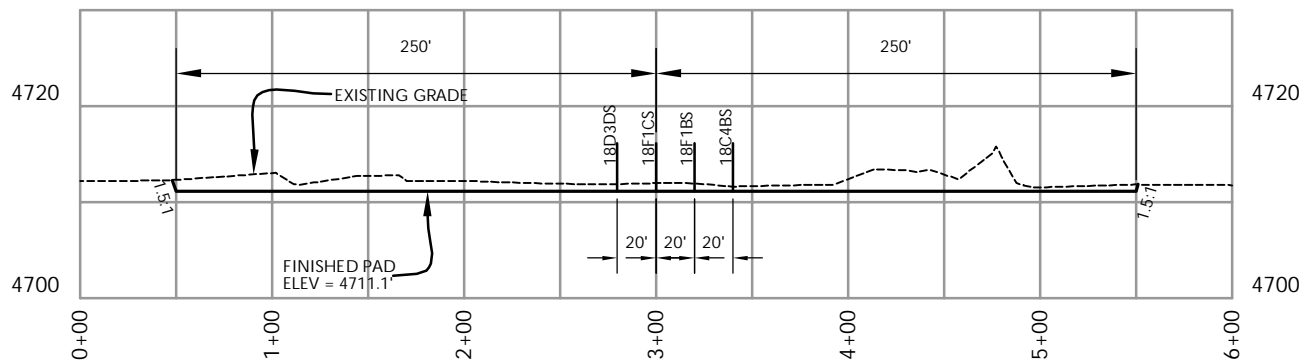


CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

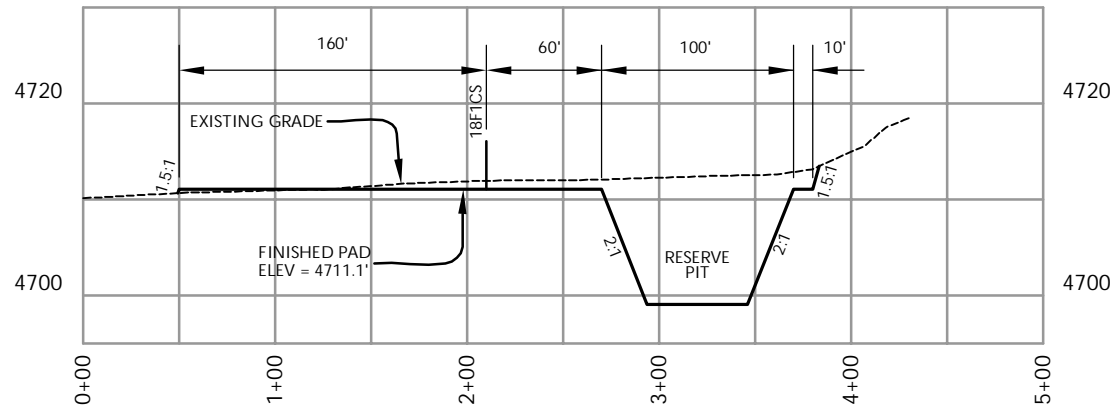
Scale: 1"=60'	Date: 2/27/09	SHEET NO:
REVISED:	GMH 5/19/09	6 6 OF 13

Timberline Engineering & Land Surveying, Inc. (435) 789-1365
38 WEST 100 NORTH VERNAL, UTAH 84078

WELL PAD - LOCATION LAYOUT
NBU 921-18D3DS, NBU 921-18F1CS,
NBU 921-18F1BS & NBU 921-18C4BS
LOCATED IN SECTION 18, T.9S., R.21E.
S.L.B.&M., UINTAH COUNTY, UTAH



CROSS SECTION A-A'



CROSS SECTION B-B'

NOTE: CROSS SECTION B-B' DEPICTS
MAXIMUM RESERVE PIT DEPTH.

**KERR-MCGEE OIL & GAS
ONSHORE L.P.**

1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS
NBU 921-18D3DS, NBU 921-18F1CS,
NBU 921-18F1BS & NBU 921-18C4BS
LOCATED IN SECTION 18, T.9S., R.21E.
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

Scale: 1"=100'

Date: 2/27/09

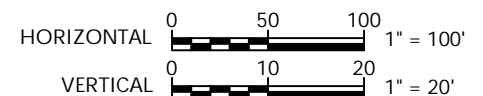
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REVISED:

GMH
5/19/09

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7 OF 13



Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

BOTTOM HOLE FOOTAGES

NBU 921-18D3DS
1200' FNL & 830' FWL

NBU 921-18F1CS
1970' FNL & 2590' FWL

NBU 921-18F1BS
1475' FNL & 2590' FWL

NBU 921-18C4BS
970' FNL & 2590' FWL

WELL PAD INTERFERENCE PLAT

DIRECTIONAL PAD - CIGE 129

BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 13, T9S, R20E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°57'36"W.



LATITUDE & LONGITUDE Surface Position - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
921-18D3DS	40°02'27.204" 40.040890°	109°35'58.107" 109.599474°
921-18F1CS	40°02'27.253" 40.040904°	109°35'57.857" 109.599405°
921-18F1BS	40°02'27.302" 40.040917°	109°35'57.608" 109.599335°
921-18C4BS	40°02'27.351" 40.040931°	109°35'57.358" 109.599266°
Existing Well CIGE 129	40°02'26.793" 40.040776°	109°35'57.509" 109.599308°

LATITUDE & LONGITUDE Bottom Hole - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
921-18D3DS	40°02'24.002" 40.040000°	109°36'10.345" 109.602874°
921-18F1CS	40°02'16.607" 40.037946°	109°35'47.543" 109.596540°
921-18F1BS	40°02'21.497" 40.039305°	109°35'47.659" 109.596572°
921-18C4BS	40°02'26.486" 40.040690°	109°35'47.777" 109.596605°

S75°42'23"W
AZ=255.70639°
S71°17'16"W - 1005.69'
(To Bottom Hole)
AZ=251.28778°

SURFACE POSITION FOOTAGES:

NBU 921-18D3DS
888' FNL & 1788' FWL

NBU 921-18F1CS
883' FNL & 1807' FWL

NBU 921-18F1BS
878' FNL & 1827' FWL

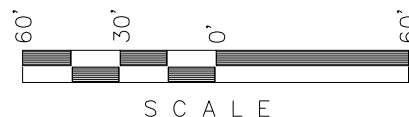
NBU 921-18C4BS
873' FNL & 1846' FWL

EXISTING WELL CIGE 129
930' FNL & 1834' FWL

LATITUDE & LONGITUDE Surface Position - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
921-18D3DS	40°02'27.332" 40.040925°	109°35'55.621" 109.598784°
921-18F1CS	40°02'27.381" 40.040939°	109°35'55.371" 109.598714°
921-18F1BS	40°02'27.430" 40.040953°	109°35'55.121" 109.598645°
921-18C4BS	40°02'27.479" 40.040966°	109°35'54.872" 109.598576°
Existing Well CIGE 129	40°02'26.920" 40.040811°	109°35'55.023" 109.598617°

LATITUDE & LONGITUDE Bottom Hole - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
921-18D3DS	40°02'24.130" 40.040036°	109°36'07.858" 109.602183°
921-18F1CS	40°02'16.735" 40.037982°	109°35'45.057" 109.595849°
921-18F1BS	40°02'21.625" 40.039340°	109°35'45.173" 109.595881°
921-18C4BS	40°02'26.614" 40.040726°	109°35'45.291" 109.595914°

RELATIVE COORDINATES From Surface Position to Bottom Hole		
WELL	NORTH	EAST
921-18D3DS	-323'	-953'
921-18F1CS	-1079'	801'
921-18F1BS	-589'	773'
921-18C4BS	-89'	745'



Kerr-McGee
Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 921-18D3DS, NBU 921-18F1CS,
NBU 921-18F1BS & NBU 921-18C4BS
LOCATED IN SECTION 18, T9S, R21E,
S.L.B.&M. UTAH COUNTY, UTAH.

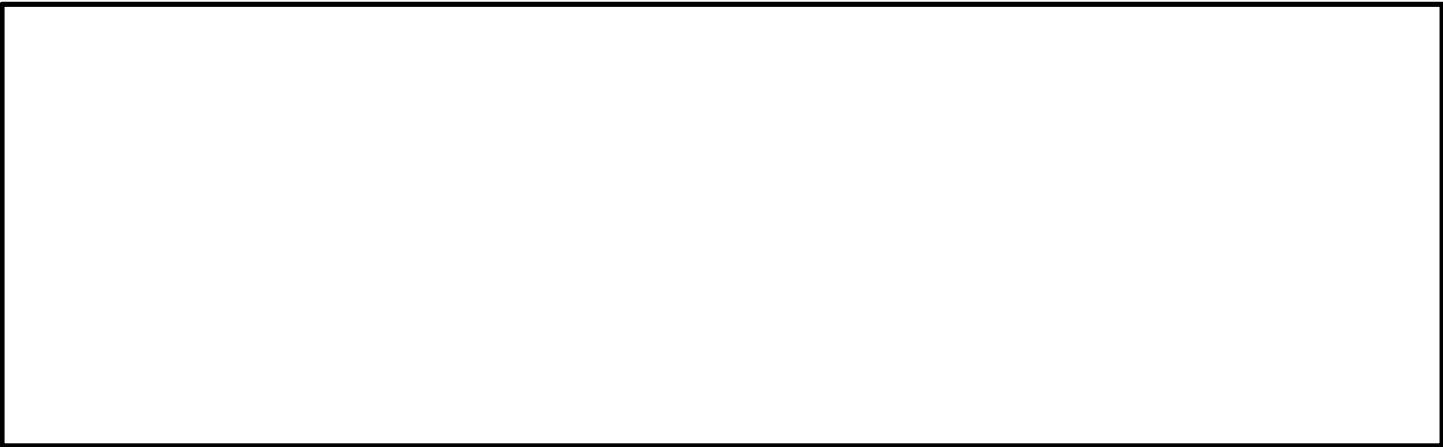


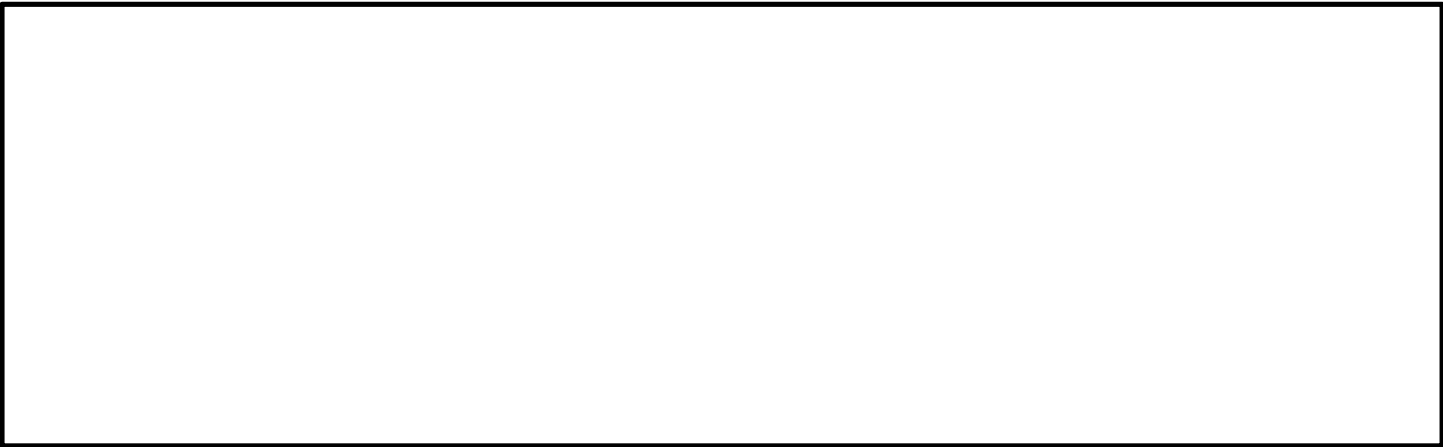
CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

DATE SURVEYED: 01-09-09	SURVEYED BY: M.S.B.
DATE DRAWN: 01-14-09	DRAWN BY: M.W.W.
REVISED: 05-04-09	

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
209 NORTH 300 WEST VERNAL, UTAH 84078

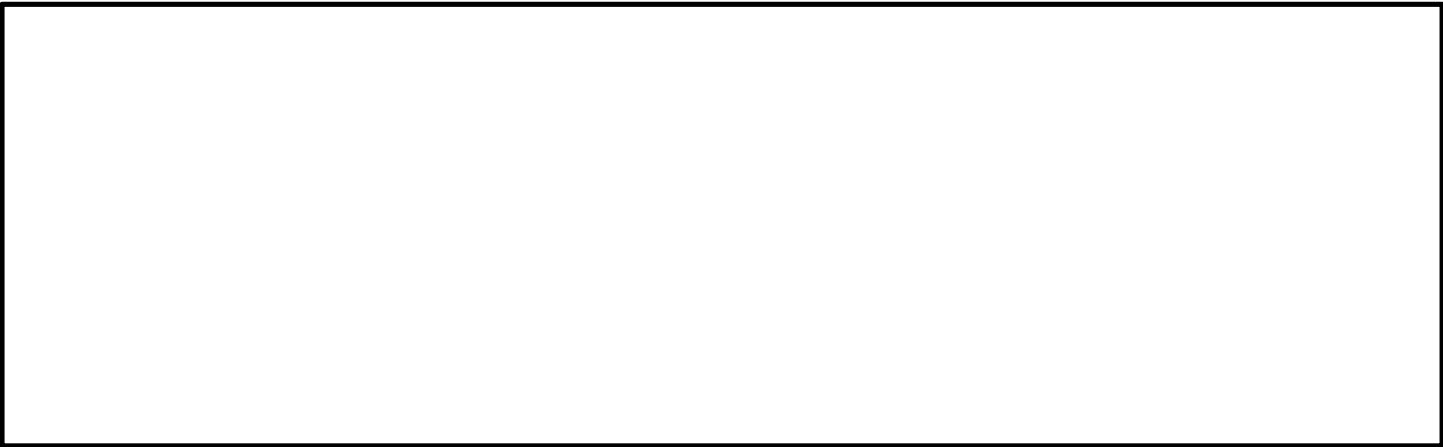
SHEET
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OF 13





'APIWellNo:43047505340000'





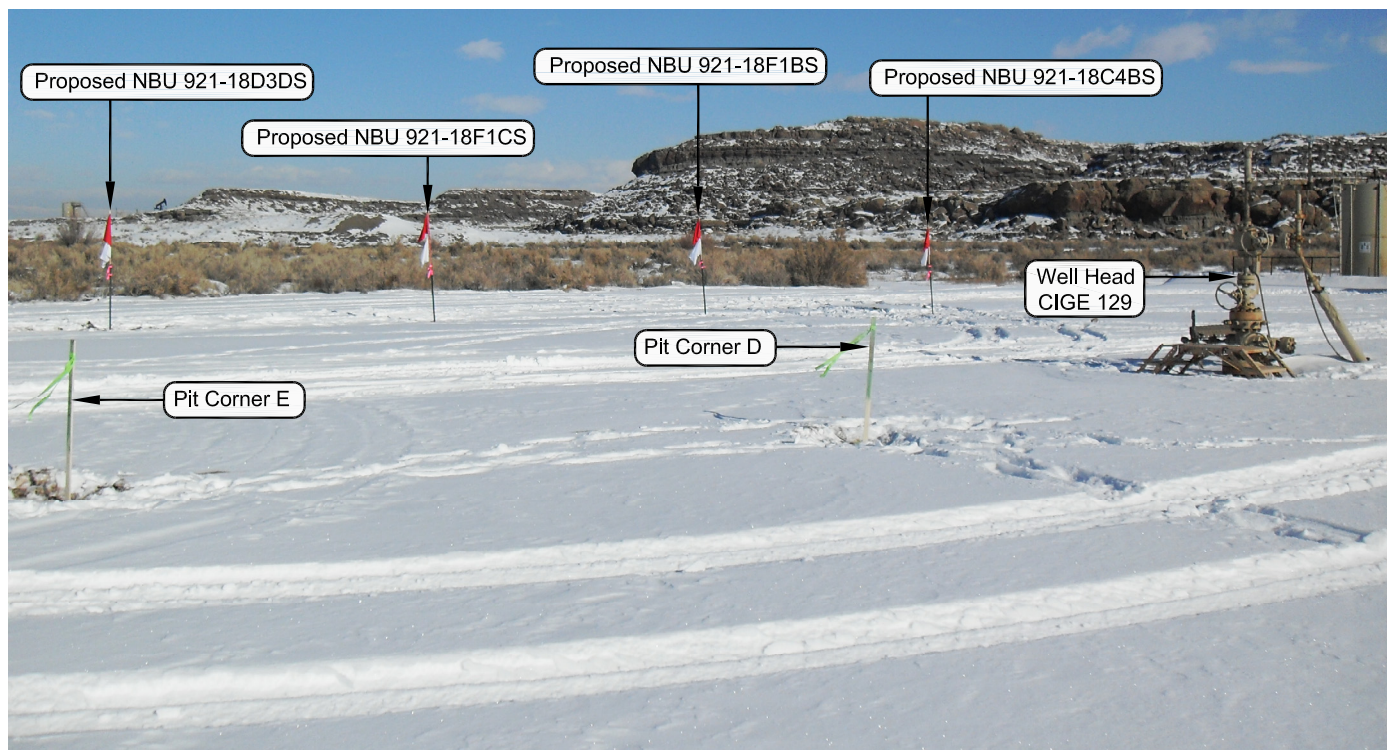


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

Kerr-McGee
Oil & Gas Onshore, LP
 1099 18th Street - Denver, Colorado 80202

NBU 921-18D3DS, NBU 921-18F1CS,
 NBU 921-18F1BS & NBU 921-18C4BS
 LOCATED IN SECTION 18, T9S, R21E,
 S.L.B.&M. UTAH COUNTY, UTAH.



CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

LOCATION PHOTOS

TAKEN BY: M.S.B.

DRAWN BY: M.W.W.

DATE TAKEN: 01-09-09

DATE DRAWN: 01-15-09

REVISED: 05-04-09

Timberline (435) 789-1365
 Engineering & Land Surveying, Inc.
 209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET
8
 OF 13

Kerr-McGee Oil & Gas Onshore, LP
NBU 921-18D3DS NBU 921-18F1CS NBU 921-18F1BS NBU 921-18C4BS
Section 18, T9S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY THEN SOUTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 4.4 MILES TO A SECOND SERVICE ROAD TO THE NORTH. EXIT LEFT AND PROCEED IN A NORTHERLY DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 0.6 MILES TO A THIRD SERVICE ROAD TO THE EAST. EXIT RIGHT AND PROCEED IN AN EASTERLY, THEN NORTHERLY, THEN NORTHWESTERLY DIRECTION ALONG THE THIRD SERVICE ROAD 1.7 MILES TO THE EXISTING CIGE 129 WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 42.7 MILES IN A SOUTHERLY DIRECTION.

NBU 921-18C4BS

Surface: 873' FNL, 1,846' FWL (NW/4NW/4) Lot 1
BHL: 970' FNL 2,590' FWL (NE/4NW/4)

NBU 921-18D3DS

Surface: 888' FNL, 1,788' FWL (NW/4NW/4) Lot 1
BHL: 1,200' FNL 830' FWL (NW/4NW/4) Lot 1

NBU 921-18F1BS

Surface: 878' FNL, 1,827' FWL (NW/4NW/4) Lot 1
BHL: 1,475' FNL 2,590' FWL (SE/4NW/4)

NBU 921-18F1CS

Surface: 883' FNL, 1,807' FWL (NW/4NW/4) Lot 1
BHL: 1,970' FNL 2,590' FWL (SE/4NW/4)

Pad: NBU 921-18D
Sec. 18 T9S R21

Uintah, Utah
Mineral Lease: UTU 0581

Surface Owner: Ute Indian Tribe

ONSHORE ORDER NO. 1

***MULTI-POINT SURFACE USE & OPERATIONS PLAN
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. NOSs were submitted showing the surface locations in NW/4 NW/4 of Section 18 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

Directional Drilling:

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

1. Existing Roads:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

See MDP for additional details on road construction.

Approximately ± 0.02 ($\pm 85'$) mile of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.

Approximately $\pm 5,780'$ of new pipeline is proposed. Refer to Topo D for the existing pipeline.

Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

5. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

7. Methods of Handling Waste Materials:

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

8. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

9. Well Site Layout: (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

10. Plans for Reclamation of the Surface:

See MDP for additional details on Plans for Reclamation of the Surface.

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe

PO Box 70

Fort Duchesne, Utah 84026

435-722-5141

The mineral ownership is listed below:

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
435-781-4400

12. Other Information:

See MDP for additional details on Other Information.

13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan
Staff Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6007

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.


Kathy Schneebeck Dulnoan

June 29, 2009
Date



Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779

June 9, 2009

Diana Mason
Utah Department of Oil, Gas & Mining
P.O. Box 145801
Salt Lake City, Utah 54114-6100

RE: Directional Drilling Letter R649-3-11
NBU 921-18F1BS
T9S-R21E
Section 18: NW/4NW/4 surface, SE/4NW/4 bottom hole
878' FNL, 1827' FWL (surface)
1475' FNL, 2590' FWL (bottom hole)
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 921-18F1BS is located within the Natural Buttes Unit Area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit to be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

Joe Matney
Senior Staff Landman

'APIWellNo:43047505340000'

**Paleontological Assessment for
Anadarko Petroleum Corp.**

NBU 921-18C4BS, D3DS, F1BS, F1CS

Ouray SE Quadrangle

Uintah County, Utah

Prepared for

Anadarko Petroleum Corp.

and

Ute Tribe

Uintah and Ouray Reservation

Prepared by

SWCA Environmental Consultants

SWCA #UT09-14314-21

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS
ONSHORE LP'S 34 PROPOSED WELL LOCATIONS
IN TOWNSHIP 9S, RANGE 21E,
SECTIONS 11, 15, 18, 22, 25 AND 28
UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:
Ute Tribal Land
Uintah and Ouray Agency

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532

MOAC Report No. 08-319

February 19, 2009

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

Ute Tribal Permit No. A08-363

API Number: 4304750534

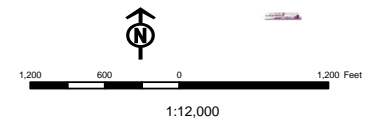
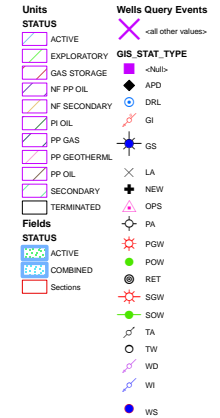
Well Name: NBU 921-18F1BS

Township 09.0 S Range 21.0 E Section 18

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

July 10, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District
From: Michael Coulthard, Petroleum Engineer
Subject: 2009 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
43-047-50526	NBU 920-14M1CS Sec 14 T09S R20E 0449 FSL 0640 FWL BHL Sec 14 T09S R20E 0840 FSL 0690 FWL	
43-047-50533	NBU 921-18F1CS Sec 18 T09S R21E 0883 FNL 1807 FWL BHL Sec 18 T09S R21E 1970 FNL 2590 FWL	
43-047-50534	NBU 921-18F1BS Sec 18 T09S R21E 0878 FNL 1827 FWL BHL Sec 18 T09S R21E 1475 FNL 2590 FWL	
43-047-50535	NBU 921-18D3DS Sec 18 T09S R21E 0888 FNL 1788 FWL BHL Sec 18 T09S R21E 1200 FNL 0830 FWL	
43-047-50536	NBU 921-18C4BS Sec 18 T09S R21E 0873 FNL 1846 FWL BHL Sec 18 T09S R21E 0970 FNL 2590 FWL	

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:7-10-09

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 7/1/2009

API NO. ASSIGNED: 43047505340000

WELL NAME: NBU 921-18F1BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NWNW 18 090S 210E

Permit Tech Review: ☒

SURFACE: 0878 FNL 1827 FWL

Engineering Review: ☒

BOTTOM: 1475 FNL 2590 FWL

Geology Review: ☒

COUNTY: UINTAH

LATITUDE: 40.04088

LONGITUDE: -109.59865

UTM SURF EASTINGS: 619553.00

NORTHINGS: 4433025.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0581

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

Commingle Approved

LOCATION AND SITING:

☐ **R649-2-3.**

Unit: NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

Board Cause No: Cause 173-14

Effective Date: 12/2/1999

Siting: 460' fr u bdry & uncomm. tract

☒ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingle - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-18F1BS
API Well Number: 43047505340000
Lease Number: UTU 0581
Surface Owner: INDIAN
Approval Date: 7/16/2009

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingling:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

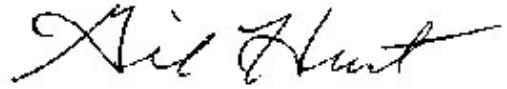
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, flowing script.

Gil Hunt
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581			
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000			
PHONE NUMBER: 720 929-6007 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
COUNTY: Uintah		STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 7/16/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____ </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____
<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
NAME (PLEASE PRINT) Danielle Piernot		PHONE NUMBER 720 929-6156			
SIGNATURE N/A		TITLE Regulatory Analyst			
DATE 7/16/2010		APPROVED BY: <div style="text-align: right;"> Approved by the Utah Division of Oil, Gas and Mining Date: <u>July 22, 2010</u> By: </div>			



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047505340000

API: 43047505340000

Well Name: NBU 921-18F1BS

Location: 0878 FNL 1827 FWL QTR NWNW SEC 18 TWP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the
Utah Division of
Oil, Gas and Mining**

Signature: Danielle Piernot

Date: 7/16/2010

Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: July 22, 2010

By: 

RECEIVED July 16, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

JUL 01 2009

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0581
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP		7. If Unit or CA Agreement, Name and No. 891008900A
Contact: DANIELLE E PIERNOT Email: Danielle.Piernot@anadarko.com		8. Lease Name and Well No. NBU 921-18F1BS
3a. Address PO BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	9. API Well No. 43-047-50534
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW Lot 1 878FNL 1827FWL 40.04092 N Lat, 109.59934 W Lon At proposed prod. zone SENW 1475FNL 2590FWL 40.03930 N Lat, 109.59657 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 12 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 18 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1475 FEET	16. No. of Acres in Lease 2399.60	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 495 FEET		13. State UT
19. Proposed Depth 10711 MD 10540 TVD		17. Spacing Unit dedicated to this well
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4712 GL		20. BLM/BIA Bond No. on file WYB000291
22. Approximate date work will start 07/20/2009		23. Estimated duration 60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 07/01/2009
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date MAY 02 2011
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #71601 verified by the BLM Well Information System
For KERRMCGEE OIL&GAS ONSHORE LP sent to the Vernal Field Office
Committed to AFMSS for processing by 07/06/2009

NOTICE OF APPROVAL

MAY 04 2011

AFMSS#

UDOGM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

096XJ5149AE



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	Kerr McGee Oil & Gas Onshore	Location:	Lot 1, Sec. 18, T9S, R21E
Well No:	NBU 921-18F1BS	Lease No:	UTU-0581
API No:	43-047-50534	Agreement:	Natural Buttes Unit

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

***SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- Paint old and new facilities "Shadow Gray."
- Move the existing pipeline off the damage area of the well pad.
- Monitor construction operations by a permitted archaeologist.
- Construct diversion drainages around the west side of the well pad.
- Construct Facilities According to The BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM, 2003) if needed.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002, a raptor survey shall be conducted prior to expansion of the well pad or pipeline upgrade if construction will take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines. An active great horned owl nest must be offset by a distance of 0.25 mile during the nesting season from February 1 through September 30 (See Appendix D).
- If project construction operations are not initiated before June 17, 2010, KMG shall conduct additional biological surveys in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its operation according to its specifications.

BIA Standard Conditions of Approval:

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on

access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

- **DOWNHOLE PROGRAM**

CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- A formation integrity test shall be performed at the surface casing shoe.
- A Gamma Ray Log shall be run from TD to surface.

Variances Granted:

Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for two truck/trailer mounted air compressors located within 40 feet from the well bore and 60' from the blooie line.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

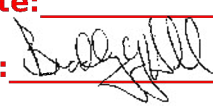
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9																														
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Approved by the Utah Division of Oil, Gas and Mining Date: 06/20/2011 By: 																																
NAME (PLEASE PRINT) Andy Lytle		PHONE NUMBER 720 929-6100																														
SIGNATURE N/A		TITLE Regulatory Analyst																														
DATE 6/13/2011																																



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047505340000

API: 43047505340000

Well Name: NBU 921-18F1BS

Location: 0878 FNL 1827 FWL QTR NWNW SEC 18 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Andy Lytle

Date: 6/13/2011

Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Jun. 13, 2011

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 06/23/2011 AT 1000 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Sheila Wopsock		PHONE NUMBER 435 781-7024
SIGNATURE N/A		TITLE Regulatory Analyst
DATE 6/27/2011		

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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON JULY 8, 2011. DRILLED SURFACE HOLE TO 2900'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/12/2011	

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Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Andy Lytle		PHONE NUMBER 720 929-6100
SIGNATURE N/A		TITLE Regulatory Analyst
		DATE 7/12/2011

Spud
BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCI Phone Number 435.781.7024
Well Name/Number NBU 921-18F1BS
Qtr/Qtr NWNW Section 18 Township 9S Range 21E
Lease Serial Number UTU-0581
API Number 4304750534

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 06/23/2011 1000 HRS AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time 07/08/2011 0800 HRS AM ☒ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT
KENNY GATHINGS AT 435.781.7048 FOR MORE

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750536	NBU 921-18C4BS	NWNW	18	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
B	99999	2900	6/23/2011	6/29/11		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 06/23/2011. <i>BHL = NENW</i>						

Well 2

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750534	NBU 921-18F1BS	NWNW	18	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
B	99999	2900	6/23/2011	6/29/11		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 06/23/2011 AT 1000 HRS. <i>BHL = SENW</i>						

Well 3

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750533	NBU 921-18F1CS	NWNW	18	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
B	99999	2900	6/23/2011	6/29/11		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL LOCATION ON 06/23/2011 AT 1100 HRS. <i>BHL = SENW</i>						

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

6/27/2011

Date

(5/2000)

RECEIVED

JUN 27 2011

DIV. OF OIL, GAS & MINING

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NBU 921-18F1BS
Qtr/Qtr NWNW Section 18 Township 9S Range 21E
Lease Serial Number UTU-0581
API Number 4304750534

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 06/23/2011 1000 HRS AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

RECEIVED

JUN 28 2011

DIV. OF OIL, GAS & MINING

Date/Time 07/08/2011 0800 HRS AM ☒ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT
KENNY GATHINGS AT 435.781.7048 FOR MORE

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581			
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
TYPE OF SUBMISSION <input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 8/11/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	TYPE OF ACTION <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the total depth (TD) to include the Blackhawk formation, which is in the Mesaverde group for this well. Please see the attached for additional details. Please contact the undersigned if you have any questions and/or comments. Thank you.					
Approved by the Utah Division of Oil, Gas and Mining Date: 08/22/2011 By:					
NAME (PLEASE PRINT) Andy Lytle		PHONE NUMBER 720 929-6100			
SIGNATURE N/A		TITLE Regulatory Analyst			
DATE 8/11/2011					

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 921-18F1BS**

Surface: 878 FNL / 1827 FWL NWNW
 BHL: 1475 FNL / 2590 FWL SENW

Section 18 T9S R21E

Unitah County, Utah
 Mineral Lease: UTU 0581

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1706	
Birds Nest	1983	Water
Mahogany	2364	Water
Wasatch	5112	Gas
Mesaverde	8250	Gas
MVU2	9249	Gas
MVL1	9802	Gas
Sego	10557	Gas
Castlegate	10683	Gas
MN5	10975	Gas
TVD	11575	
TD	11745	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 11575' TVD, approximately equals
7,692 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 5,146 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-

(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	August 11, 2011		
WELL NAME	NBU 921-18F1BS					TD	11,575'	TVD	11,745' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		4,711'
SURFACE LOCATION	NWNW	878 FNL	1827 FWL	Sec 18	T 9S	R 21E			
	Latitude:	40.040917	Longitude:	-109.599335			NAD 83		
BTM HOLE LOCATION	SEnw	1475 FNL	2590 FWL	Sec 18	T 9S	R 21E			
	Latitude:	40.039305	Longitude:	-109.596572			NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Tribal (Surface), UDOGM Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
<p>All water flows encountered while drilling will be reported to the appropriate agencies.</p> <p>Green River @ 1,706' Top of Birds Nest @ 1,983' Mahogany @ 2,364'</p> <p>Preset f/ GL @ 2,900' TVD</p> <p>Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.</p> <p>Wasatch @ 5,112'</p> <p>Mud logging program TBD Cased hole logging program from TD - surf csg</p> <p>Mverde @ 8,250' TVD</p> <p>MVU2 @ 9,249' TVD</p> <p>MVU1 @ 9,802' TVD</p> <p>Sego @ 10,557' TVD</p> <p>Castlegate @ 10,683' TVD</p> <p>MN5 @ 10,975' TVD</p> <p>Max anticipated Mud required 13.0 ppg</p> <p>TD @ 11,745' MD</p>			12-1/4"	9-5/8", 36#, J-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# HCP-110 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-13.0 ppg



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	BTC
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	9-5/8"	0 to 2,900	36.00	J-55	LTC	1.86	1.39	3.81	N/A
						10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0 to 11,745	11.60	HCP-110	LTC or BTC	1.19	1.11	2.56	3.36

Surface casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized						
	LEAD	2,400'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	250	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	200	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	140		15.80		1.15
PRODUCTION	LEAD	4,605'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	20%	11.00		3.38
	TAIL	7,140'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,680	35%	14.30		1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

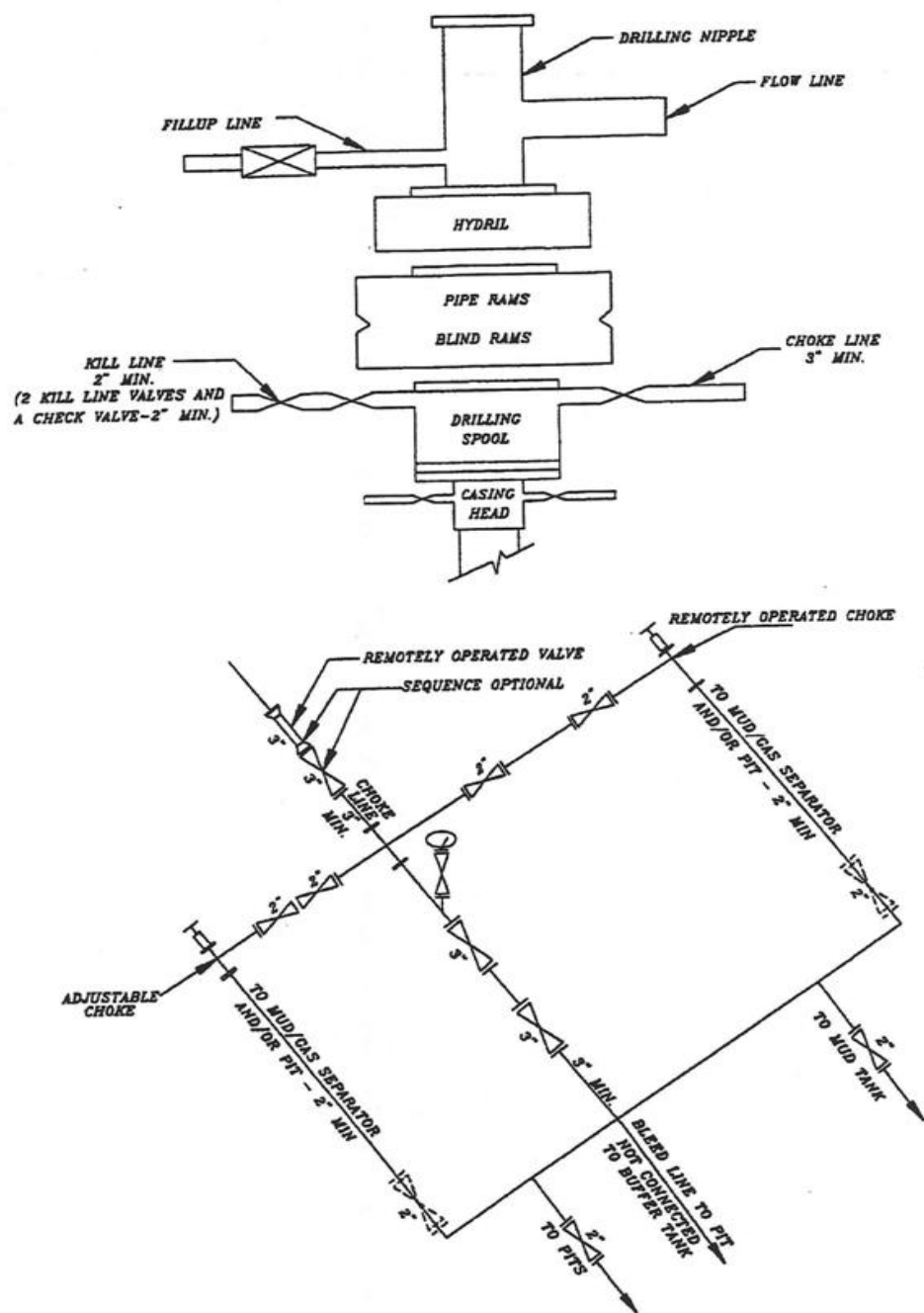
Nick Spence / Danny Showers

DATE:**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A NBU 921-18F1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581			
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PHONE NUMBER: 720 929-6515 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
COUNTY: UINTAH		STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 8/30/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:
<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: 			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. This sundry is being submitted on behalf of the Natural Buttes Unit. Kerr-McGee Oil and Gas, LP requests authorization to drill the above captioned well with a closed-loop system. Please see the attached Exhibit A. Thank you.					
Accepted by the Utah Division of Oil, Gas and Mining Date: 09/14/2011 By:					
NAME (PLEASE PRINT) Laura Abrams		PHONE NUMBER 720 929-6356			
SIGNATURE N/A		TITLE Regulatory Analyst II			
		DATE 8/30/2011			

Exhibit A

Kerr-McGee Oil and Gas Onshore, LP respectfully requests authorization to drill the above captioned well utilizing a closed-loop mud system.

The drilling pit was constructed per the requirements of the Application for Permit to Drill; therefore the liner will be temporarily removed from the pit, the pit will be partially backfilled, and liner will be re-set. All other aspects of the pit shall remain the same.

Equipment for the closed-loop system will be as follows:

- 2 HS-3400 Centrifuge
- 1 Conical Clarifying Tank
- 1 Polymer/Flocculation Unit
- 1 Catch Tank for Solids
- 1 4x3 Centrifugal Pump

Storage Tank Roll (6 frac tanks - 4 water, 2 mud):

- 1 4x3 Centrifugal Pump
- 1 Manifold
- 8 3-inch hose/20 foot section x qty 8 (estimate)
- 8 4-inch hose/20 foot section x qty 8 (estimate)

A 250 KW Generator (est. 20 gal/hr fuel rate) and a Power Distribution Panel will be utilized if deemed necessary.

Please be advised that verbal authorization for the proposed closed-loop system was give by Engineer Robin Hansen to Julie Jacobson on Monday, August 29, 2011 at 12:00 pm.

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54
Submitted By STUART NEILSON Phone Number 435- 790-2921
Well Name/Number NBU 921-18F1BS
Qtr/Qtr NW4, NW/4 Section 18 Township 9S Range 21E
Lease Serial Number UTU0581
API Number 4304750534

Casing – Time casing run starts, not cementing times.

- ☐ Production Casing
☐ Other

Date/Time _ _ AM ☐ PM ☐

BOPE

- ☒ Initial BOPE test at surface casing point
☐ Other

Date/Time 9/24/11 6 AM ☒ PM ☐

Rig Move

Location To:

Date/Time _ _ AM ☐ PM ☐

Remarks _
-

RECEIVED

SEP 23 2011

DIV. OF OIL, GAS & MINING

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54
Submitted By STUART NEILSON Phone Number 435- 790-2921
Well Name/Number NBU 921-18F1BS
Qtr/Qtr NW4, NW/4 Section 18 Township 9S Range 21E
Lease Serial Number UTU0581
API Number 4304750534

Casing – Time casing run starts, not cementing times.

- ☒ Production Casing
☐ Other

Date/Time 10/05/11 20:00 AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point
☐ Other

Date/Time _ _ AM ☐ PM ☐

Rig Move

Location To: _____

Date/Time _ _ AM ☐ PM ☐

Remarks

RECEIVED

OCT 04 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581			
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000			
PHONE NUMBER: 720 929-6515 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
COUNTY: UINTAH		STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 9/29/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The operator requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well. The operator					
<div style="text-align: right; font-weight: bold; font-size: 1.2em;"> Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY </div>					
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst			
SIGNATURE N/A	DATE 9/29/2011				

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/7/2011	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU ROTARY RIG. FINISHED DRILLING FROM 2900' TO 11,700' ON OCTOBER 4, 2011. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED PIONEER RIG 54 ON OCTOBER 7, 2011 @ 06:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/10/2011	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000
PHONE NUMBER: 720 929-6516		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/6/2011	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input checked="" type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text" value="Cement Remediation"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input type="checkbox"/> DRILLING REPORT Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests approval for the attached well procedure. The subject well will be fracture stimulated and followed by remedial cement squeezes. This well has been identified as requiring remediation and is currently being monitored and handled by our bradenhead best management practices. Thank you.

**Accepted by the
Utah Division of
Oil, Gas and Mining**

FOR RECORD ONLY

January 09, 2012

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/6/2012	

Greater Natural Buttes Unit



NBU 921-18F1BS

COMPLETIONS PROCEDURE AND CEMENT SQUEEZE

DATE:12/2/2011

AFE#:2028729

API#:4304750534

USER ID:OOT937 (Frac Invoices Only)

COMPLETIONS ENGINEER: Zachary Garrity, Denver, CO
(720) 929-6180 (Office)
(406) 781-6427 (Cell)

SIGNATURE:

ENGINEERING MANAGER: JEFF DUFRESNE

SIGNATURE:

REMEMBER SAFETY FIRST!

Name: NBU 921-18F1BS**Location:** NW NE SE NW Sec 18 T9S R21E**LAT:** 40.040917 **LONG:** -109.599335 **COORDINATE:** NAD83 (*Surface Location*)**Uintah County, UT****Date:** 12/2/2011**ELEVATIONS:** 4711' GL 4730' KB *Frac Registry TVD: 11565'***TOTAL DEPTH:** 11700'**PBTD:** 11648'**SURFACE CASING:** 9 5/8", 36# J-55 LT&C @ 2883'**PRODUCTION CASING:** 4 1/2", 11.6#, P-110 BT&C @ 11694'Marker Joint **5108-5129; 8390-8410; and 11116-11138'****TUBULAR PROPERTIES:**

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl/ft)	(gal/ft)
2 3/8" 4.7# J-55 tbg	7,700	8,100	1.901"	0.00387	0.1624
4 1/2" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 1/2" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 1/2" Annulus				0.0101	0.4227

TOPS:

1762' Green River Top
 2041' Bird's Nest Top
 2565' Mahogany Top
 5257' Wasatch Top
 8385' Mesaverde Top

BOTTOMS:

8385' Wasatch Bottom
 11700' Mesaverde Bottom (TD)

T.O.C. @ 3240' Schlumberger CBL - 11/9/11**GENERAL:**

- A minimum of **33** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Schlumberger's RST log dated 11/9/11
- **3** fracturing stages required for coverage.
- Procedure calls for **3** CBP's (**1-8,000 and 2-10,000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor as per design
- 30/50 mesh **TLC** sand, **Slickwater frac**.
- Maximum surface pressure **9000 psi**.
- **If casing pressure test fails. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation**

(specific details on remediation will be provided in post-job-report). Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 9000 psi for 30 minutes.

- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- **Call flush at 0 PPG @ inline densimeters. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.**
- **If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)**
- **TIGHT SPACING ON STAGE 2- OVERFLUSH BY 5 BBLS**
- **Max Sand Concentration: Blackhawk 1.5 ppg**
- **Well has possible gas migration in-between the Surface 9-5/8" and Production 4-1/2". Perform remediation after frac job has finished**

PROCEDURE:

1. Monitor current gas flow and/or pressure building up on the surface casing to establish a buildup rate.
2. NU and test BOPs. RIH 3 7/8" mill and clean out to PBTD @ ~11648' if possible, or to 11510' at a minimum. Circulate hole clean with recycled water. POOH. Run CBL (if needed).
3. ND BOPs and NU frac valves. Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to **9000 psi** for 30 minutes; if pressure test fails contact Denver engineer and see notes. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 9-5/8" annulus. Lock **OPEN** the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

4. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
LOWER MESAVERDE	11426	11427	3	3
LOWER MESAVERDE	11436	11438	3	6
LOWER MESAVERDE	11450	11452	3	6
LOWER MESAVERDE	11465	11467	3	6
LOWER MESAVERDE	11479	11480	3	3

5. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~11426' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

NOTE: STAGE 1 SHOULD BE ALL 30/50 TLC SAND

6. **Set 10,000 psi CBP** psi CBP at ~11,370'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
LOWER MESAVERDE	11219	11220	3	3
LOWER MESAVERDE	11233	11234	3	3
LOWER MESAVERDE	11251	11252	3	3

LOWER MESAVERDE	11262	11263	3	3
LOWER MESAVERDE	11281	11282	3	3
LOWER MESAVERDE	11320	11321	3	3
LOWER MESAVERDE	11329	11330	3	3
LOWER MESAVERDE	11339	11340	3	3

7. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~11219' and trickle 250gal 15%HCL w/ scale inhibitor in flush.
NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs
NOTE: STAGE 2 SHOULD BE ALL 30/50 TLC SAND

8. **Set 10,000 psi CBP** psi CBP at ~11,209'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
LOWER MESAVERDE	11146	11147	4	4
LOWER MESAVERDE	11164	11166	3	6
LOWER MESAVERDE	11174	11176	4	8
LOWER MESAVERDE	11188	11190	3	6

9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~11146' flush only with recycled water.
NOTE: STAGE 3 SHOULD BE ALL 30/50 TLC SAND

10. Set 8000 psi CBP at ~11,096'. Call for tubing.

11. ND Frac Valves , NU and Test BOPs. Pressure test casing to 1000 and 3500 psi for 15 minutes each.

12. RIH and perf the following 3-3/8" gun, 23 gm, 0.36" hole:

From	To	spf	# of shots
2900	2901	6	6

*** Location picked off CBL; See Attached on pages 9-11*

13. Establish injection rate into perforations
14. Monitor annulus between surface casing and 4-1/2" casing for communication. Based on communication results; perform desired cement squeeze.
15. RIH set CICR at ~**2880'**.
16. R/U cement company and pump recommended cement job into perforations from **2900-2901'**, based off injection rate and pressure. PUH w/stinger and cap with CICR with cement. Reverse circulate clean. WOC for a minimum 12 hours prior to drill out.
17. POOH. TIH with 3 7/8" bit, and tubing. D-O CICR and cement to ~**2920'**. Pressure test casing and perforations to 1000 psi for 10 minutes. Also verify that there is no gas flow or pressure building up on the surface casing. Contact engineer if there is a test failure.
18. RIH and set **20'** Weatherford casing patch over existing cement squeeze perforations from **2900-2901'**.

19. Pressure test casing patches and casing to 1000, 2500, and 3500 psi for 15 minutes each. RDMO
20. TIH with 3-1/4" bit, pump off sub, SN and tubing. Drill plugs and clean out to PBTD. Shear off bit and land tubing at $\pm 11189'$ unless indicated otherwise by the well's behavior.
21. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
22. **Leave surface casing valve open.** Monitor and report any flow from surface casing. RDMO

**For design questions, please call
Zachary Garrity, Denver, CO
(720) 929-6180 (Office)
(406) 781-6427 (Cell)**

**For field implementation questions, please call
Jeff Samuels, Vernal, UT
(435) 781-7046 (Office)**

NOTES:

TIGHT SPACING ON STAGE 2– OVERFLUSH BY 5 BBLS

Verify that the Braden head valve is locked OPEN.

Max Sand Concentration: Blackhawk 1.5 ppg

Well has possible gas migration in-between the Surface 9-5/8" and Production 4-1/2". Perform remediation after frac job has finished

Name NBU 921-18F1BS
Perforation and CBP Summary

Stage	Zones	Perforations		SPF	Holes		Fracture Coverage		
		Top, ft	Bottom, ft						
1	LOWER MESAVERDE	11426	11427	3	3		11426	to	11427
	LOWER MESAVERDE	11436	11438	3	6		11436	to	11438
	LOWER MESAVERDE	11450	11452	3	6		11450	to	11452
	LOWER MESAVERDE	11465	11467	3	6		11465	to	11467
	LOWER MESAVERDE	11479	11480	3	3		11479	to	11480
	# of Perfs/stage				24		CBP DEPTH	11,370	
2	LOWER MESAVERDE	11219	11220	3	3		11219	to	11220
	LOWER MESAVERDE	11233	11234	3	3		11233	to	11234
	LOWER MESAVERDE	11251	11252	3	3		11251	to	11252
	LOWER MESAVERDE	11262	11263	3	3		11262	to	11263
	LOWER MESAVERDE	11281	11282	3	3		11281	to	11282
	LOWER MESAVERDE	11320	11321	3	3		11320	to	11321
	LOWER MESAVERDE	11329	11330	3	3		11329	to	11330
	LOWER MESAVERDE	11339	11340	3	3		11339	to	11340
	# of Perfs/stage				24		CBP DEPTH	11,209	
3	LOWER MESAVERDE	11146	11147	4	4		11146	to	11147
	LOWER MESAVERDE	11164	11166	3	6		11164	to	11166
	LOWER MESAVERDE	11174	11176	4	8		11174	to	11176
	LOWER MESAVERDE	11188	11190	3	6		11188	to	11190
	# of Perfs/stage				24		CBP DEPTH	11,096	
Totals					72				

NBU 921-18F1BS DIRECTIONAL SURVEY												
MD	TVD	EW	NS	INC	AZI		MD	TVD	EW	NS	INC	AZI
0	0	0.0	0.0	0.0	0.0		5841	5705	765.3	-581.1	1.8	338.7
15	15	0.0	0.0	0.0	0.0		5936	5800	764.3	-578.7	1.4	337.2
219	219	0.4	-1.3	0.8	163.4		6031	5895	763.4	-576.7	1.2	329.7
304	304	1.5	-2.2	1.3	111.6		6126	5990	762.5	-575.0	1.1	337.7
391	391	4.5	-2.9	2.9	100.1		6220	6084	761.7	-573.7	0.9	319.0
481	481	9.6	-4.2	3.8	106.8		6315	6179	760.9	-573.0	0.4	289.3
571	571	15.1	-5.8	3.6	105.3		6410	6274	760.4	-572.4	0.6	345.7
661	660	21.2	-7.6	4.5	108.1		6505	6369	760.0	-571.9	0.3	276.8
751	750	28.6	-10.8	5.7	117.0		6599	6463	759.6	-571.8	0.2	280.6
841	839	37.1	-16.0	7.1	124.8		6694	6558	759.0	-572.1	0.7	232.8
931	929	47.2	-23.4	8.8	127.5		6789	6653	758.4	-573.0	0.7	195.6
1021	1017	59.4	-32.6	10.8	127.0		6884	6748	758.0	-574.3	0.9	196.6
1111	1105	74.3	-43.1	12.5	123.8		6979	6843	757.6	-575.8	1.0	194.0
1201	1193	91.8	-54.4	14.3	121.9		7073	6937	757.2	-577.1	0.8	200.3
1291	1280	111.1	-67.3	15.6	125.2		7169	7033	757.0	-578.5	1.0	175.9
1381	1366	131.1	-81.4	16.0	125.0		7263	7127	757.0	-580.4	1.3	187.1
1471	1453	151.6	-95.8	16.2	125.3		7359	7223	757.0	-582.5	1.2	167.6
1561	1539	172.1	-111.0	16.7	127.9		7453	7317	757.1	-584.4	1.2	187.1
1651	1625	192.6	-127.2	17.1	128.5		7548	7412	757.0	-586.4	1.1	180.4
1741	1711	213.9	-143.5	17.6	126.6		7643	7507	756.9	-587.5	0.2	211.0
1831	1797	236.2	-159.9	18.2	125.9		7738	7602	757.2	-587.2	0.7	41.2
1981	1938	276.6	-189.1	20.6	125.9		7832	7696	757.9	-585.7	1.3	16.0
2011	1966	285.2	-195.2	20.7	124.9		7927	7791	758.6	-583.4	1.6	19.3
2101	2051	310.9	-213.9	20.7	127.1		8022	7886	759.5	-581.0	1.5	19.6
2191	2135	336.4	-233.1	20.8	127.1		8117	7981	760.3	-578.9	1.2	22.3
2281	2219	361.3	-252.4	20.1	128.2		8212	8076	760.7	-577.1	1.1	4.0
2371	2304	385.0	-271.1	19.1	128.5		8307	8171	761.1	-575.6	0.8	24.3
2461	2389	408.1	-288.9	18.8	126.9		8402	8266	761.6	-574.5	0.7	23.6
2551	2474	431.5	-306.2	18.9	126.1		8496	8360	761.9	-573.6	0.4	18.2
2641	2559	454.8	-323.8	19.0	128.1		8591	8455	762.3	-572.6	0.8	21.4
2731	2644	477.6	-342.2	19.1	129.7		8686	8550	762.9	-571.8	0.6	56.4
2821	2730	499.8	-360.6	18.3	129.2		8781	8645	763.9	-571.5	0.6	90.4
2856	2763	508.1	-367.4	17.5	129.8		8876	8740	764.6	-571.3	0.4	57.6
2944	2847	527.9	-383.8	16.5	129.6		8971	8835	765.4	-571.4	0.7	116.9
3089	2986	560.7	-410.4	17.4	128.6		9066	8930	766.5	-572.0	0.8	117.0
3184	3077	583.5	-427.5	17.5	125.0		9162	9026	767.6	-572.4	0.7	105.0
3279	3167	606.8	-444.3	17.7	126.7		9257	9121	768.9	-572.9	0.9	112.7
3373	3257	629.2	-459.9	16.1	122.9		9352	9216	770.5	-573.7	1.3	121.2
3468	3348	651.0	-475.0	16.4	126.4		9446	9310	772.3	-575.0	1.3	129.0
3563	3439	672.8	-491.1	16.8	126.6		9541	9405	773.8	-576.7	1.5	146.3
3658	3531	693.3	-506.2	14.3	125.9		9636	9500	774.9	-579.3	1.9	164.7
3753	3623	711.2	-518.7	12.3	124.2		9731	9595	775.5	-581.7	1.2	171.8
3848	3716	726.8	-528.8	10.4	121.5		9826	9690	775.6	-584.0	1.5	179.4
3943	3810	740.1	-537.7	9.1	126.8		9921	9785	775.7	-586.5	1.5	176.2
4037	3903	750.6	-545.4	6.9	124.4		10016	9880	776.0	-589.3	2.0	173.3
4132	3998	758.9	-552.1	6.0	134.8		10111	9975	776.4	-592.7	2.1	173.1
4227	4092	765.1	-558.5	4.8	137.0		10206	10069	776.7	-596.3	2.3	176.5
4322	4187	769.6	-563.7	3.4	143.0		10300	10163	776.8	-599.9	2.0	180.5
4417	4282	771.8	-567.2	1.6	157.0		10395	10258	776.8	-603.3	2.1	179.1
4512	4377	772.4	-569.1	0.8	173.7		10490	10353	777.1	-607.0	2.4	171.8
4606	4471	772.7	-570.6	1.1	166.3		10585	10448	778.0	-611.0	2.6	166.0
4701	4566	772.6	-571.9	0.5	217.2		10679	10542	779.1	-615.4	2.9	164.3
4796	4661	772.2	-573.1	1.1	191.9		10774	10637	780.4	-620.0	2.8	163.6
4891	4756	771.9	-575.2	1.5	186.3		10869	10732	781.9	-624.4	2.8	159.8
4986	4851	771.2	-577.6	1.6	202.3		10963	10826	783.5	-628.8	2.9	160.8
5080	4945	770.3	-580.1	1.7	198.0		11058	10921	785.0	-633.1	2.6	160.6
5175	5040	769.7	-583.1	2.1	185.7		11153	11016	786.4	-637.2	2.6	161.1
5271	5136	769.4	-586.5	1.9	186.5		11248	11110	787.9	-641.2	2.6	158.6
5366	5230	768.8	-589.1	1.3	201.4		11342	11204	789.4	-645.0	2.5	156.5
5461	5325	768.0	-590.3	0.5	245.1		11437	11299	791.0	-648.7	2.5	157.6
5556	5420	767.4	-589.8	0.8	346.5		11532	11394	792.4	-652.5	2.4	160.7
5651	5515	766.9	-587.3	2.4	348.6		11627	11489	793.7	-656.1	2.3	161.3
5746	5610	766.2	-583.9	1.8	346.8		11700	11562	794.6	-658.9	2.3	161.3

Schlumberger

Company: **KERR MCGEE OIL & GAS ONSHORE LP**

Well: **NBU 921-18F1BS**

Field: **GREATER NATURAL BUTTES**

County: **UINTAH** State: **UTAH**

**CEMENT BOND LOG
GAMMA RAY
COLLARS**

County: **UINTAH**
Field: **GREATER NATURAL BUTTES**
Location: **SHL: 878' FNL, 1827' FWL**
Well: **NBU 921-18F1BS**
Company: **KERR MCGEE OIL & GAS ONSHORE LP**

LOCATION

SHL: 878' FNL, 1827' FWL	Elev.: K.B. 4730.00 ft
BHL: 1475' FNL, 2590' FWL	G.L. 4711.00 ft
	D.F. 4731.00 ft
Permanent Datum: _____	Elev.: 4711.00 ft
Log Measured From: KELLY BUSHING	19.00 ft above Perm. Datum
Drilling Measured From: KELLY BUSHING	

API Serial No.
43047505340000

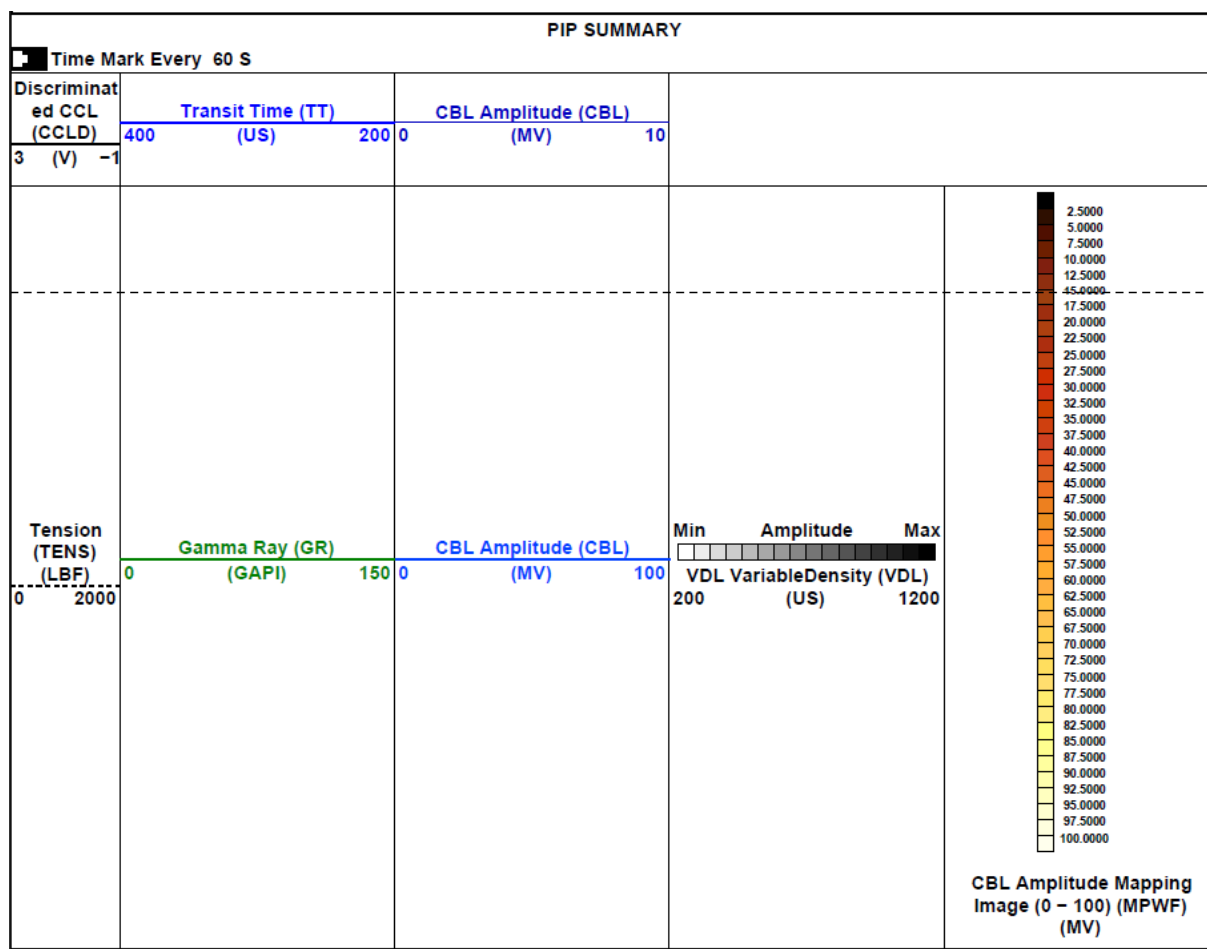
Section:
18

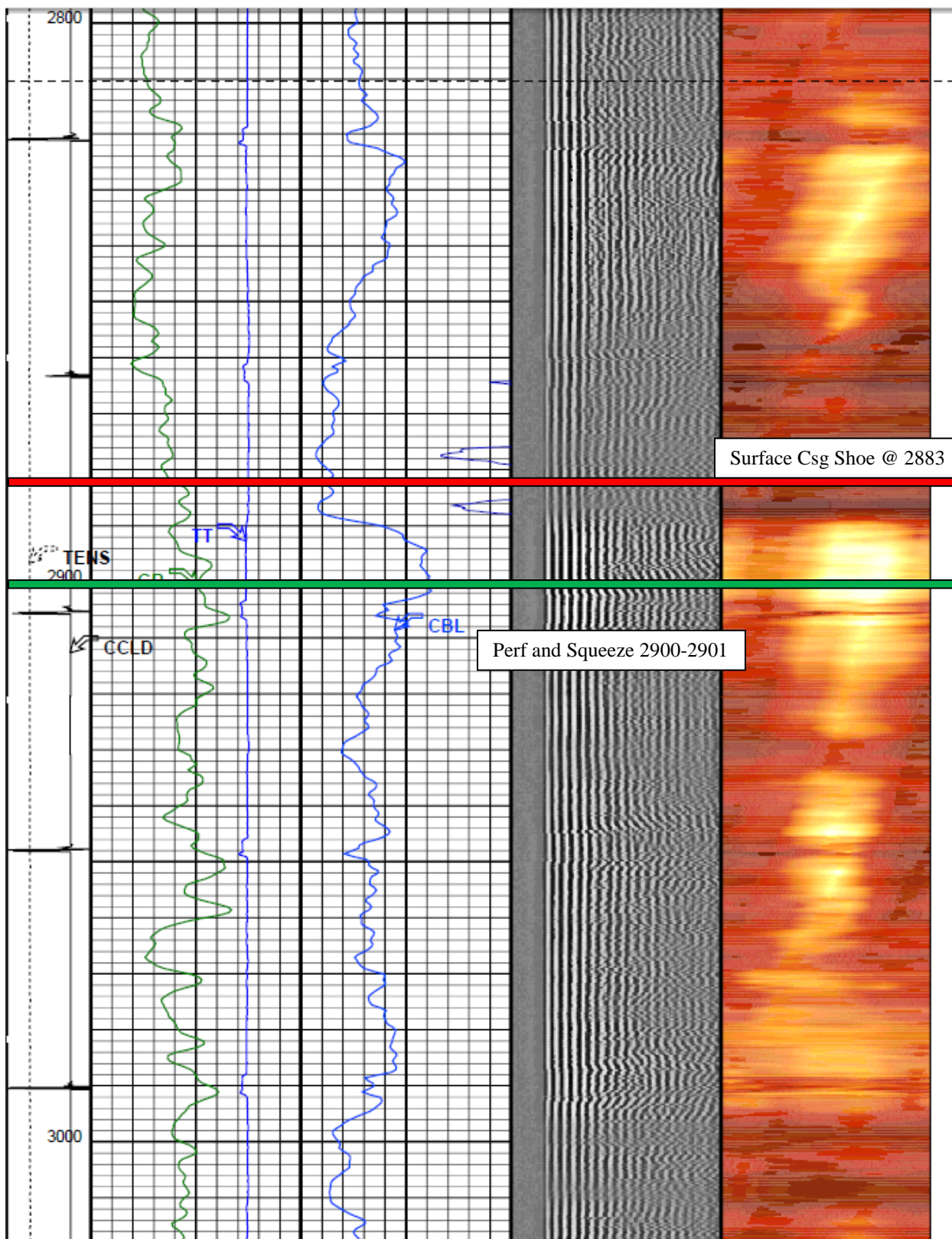
Township:
9

Range:
21E

Logging Date
9-Nov-2011

Run Number	1
Depth Driller	11575 ft
Schlumberger Depth	11588 ft
Bottom Log Interval	11580 ft
Top Log Interval	100 ft
Casing Fluid Type	WATER
Salinity	
Density	8.7 lbm/gal
Fluid Level	19 ft
BIT/CASING/TUBING STRING	
Bit Size	7.875 in
From	19 ft
To	11575 ft
Casing/Tubing Size	4.500 in
Weight	11.6 lbm/ft
Grade	
From	19 ft
To	11588 ft
Maximum Recorded Temperatures	230 degF
Logger On Bottom	9-Nov-2011
Unit Number	410
Location	VERNAL UT
Recorded By	ANDY MAY
Witnessed By	JEFF SAMUELS





STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-18F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0878 FNL 1827 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 18 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047505340000
10. FIELD and POOL or WILDCAT: NATURAL BUTTES		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/23/2012	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 01/23/2012 AT 1215 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 24, 2012		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/24/2012	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other		5. Lease Serial No. UTU0581	
b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____		6. If Indian, Allottee or Tribe Name	
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE, Mail: JAIME.SCHARNOWSKE@ANADARKO.COM		7. Unit or CA Agreement Name and No. UTU63047A	
3. Address PO BOX 173779 DENVER, CO 80217		8. Lease Name and Well No. NBU 921-18F1BS	
3a. Phone No. (include area code) Ph: 720-929-6304		9. API Well No. 43-047-50534	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NWNW 878FNL 1827FWL 40.040918 N Lat, 109.599336 W Lon At top prod interval reported below SENW 1515FNL 2613FWL At total depth SENW 1528 FNL 2633 FWL		10. Field and Pool, or Exploratory NATURAL BUTTES	
14. Date Spudded 06/23/2011		15. Date T.D. Reached 10/04/2011	
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 01/23/2012		17. Elevations (DF, KB, RT, GL)* 4711 GL	
18. Total Depth: MD 11700 TVD 11562		19. Plug Back T.D.: MD 11650 TVD 11512	
20. Depth Bridge Plug Set: MD TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) RSL/SM-CBL/GR/COLLARS-HDIL/ZDL/CNGR	
22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis)			

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
12.250	9.625 J-55	36.0	0	2883		590		0	
7.875	4.500 P-110	11.6	0	11694		2125		3240	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11180							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	11146	11480	11146 TO 11480	0.360	72	OPEN
B)						
C)						
D)						

26. Perforation Record

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
11146 TO 11480	PUMP 14,429 BBLs SLICK H2O & 327,357 LBS 30/50 OTTAWA SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/23/2012	01/24/2012	24	→	0.0	3661.0	1200.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg. 4605 SI	Csg. Press. 4800.0	24 Hr. Rate →	Oil BBL 0	Gas MCF 3661	Water BBL 1200	Gas:Oil Ratio	Well Status PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #132168 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

DIV. OF OIL, GAS & MINING

RECEIVED
MAR 13 2012

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1762 2041 2565 5257 8385

32. Additional remarks (include plugging procedure):

Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

- | | | | |
|-------------------------------------------------------|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #132168 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal

Name (please print) JAIME L. SCHARNOWSKE

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 03/05/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE	Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD	Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING	Start Date: 6/11/2011	End Date: 10/7/2011
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/W/0/1827/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/8/2011	0:00 - 2:00	2.00	MIRU	01	C	P		MIRU /// INSTALL DIVERter HEAD AND BOWIE LINE. BUILD DITCH. MOVE RIG OVER HOLE AND RIG UP. SET CATWALK AND PIPE RACKS. RIG UP AND PRIME PIT PUMP AND MUD PUMP.
	2:00 - 3:30	1.50	DRLSUR	02	B	P		SPUD 12.25" SURFACE HOLE F/ 40'- T/210' /// ROP= 170' @ 113 FPH /// WOB= 16K /// RPM= 50/95 /// SPP= 900/800 /// GPM= 550
	3:30 - 5:30	2.00	DRLSUR	06	A	P		TOOH, PU DIR TOOLS & SCRIBE, TIH
	5:30 - 12:00	6.50	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 210'- T/ 760' /// ROP= 550' @ 85 FPH /// WOB=18-20K /// RPM= 50/95 /// SPP= 1000/900 /// GPM= 550
	12:00 - 0:00	12.00	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 760'- T/ 1480' /// ROP= 720' @ 60 FPH /// WOB=18-20K /// RPM= 50/95 /// SPP= 1320/1090 /// GPM= 550 /// NO LOSSES/GAINS
7/9/2011	0:00 - 8:00	8.00	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 1480'-T/ 1960' /// ROP= 480' @ 80 FPH /// WOB=18-20K /// RPM= 50/95 /// SPP= 1380/1090 /// GPM= 550 /// NO LOSSES/GAINS
	8:00 - 11:30	3.50	DRLSUR	22	L	Z		MWD NOT COMMUNICATING /// TROUBLE SHOOT MWD
	11:30 - 16:00	4.50	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 1960'- T/ 2200' /// ROP= 240' @ 53 FPH /// WOB=18-20K /// RPM= 50/95 /// SPP= 1650/1450 /// GPM= 550 /// NO LOSSES/GAINS
	16:00 - 0:00	8.00	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 2200'- T/ 2440' /// ROP= 240' @ 30 FPH /// WOB=16-18K /// RPM= 50/95 /// SPP= 1800/1660 /// GPM= 550 /// NO LOSSES/GAINS
7/10/2011	0:00 - 10:30	10.50	DRLSUR	02	D	P		DIR DRLG 12.25" SURFACE HOLE F/ 2440'-T/ 2900' /// ROP=460' @ 44 FPH /// WOB=16-18K /// RPM= 50/95 /// SPP= 1900/1660 /// GPM= 550 /// NO LOSSES/GAINS /// LAST SURVEY @ 2841'= 17.49 DEG & 129.80 AZ /// 14' HIGH & 2' LEFT OF LINE
	10:30 - 11:30	1.00	DRLSUR	05	A	P		CIRC & COND HOLE FOR 9-5/8" SURFACE CSG
	11:30 - 16:00	4.50	DRLSUR	06	A	P		LDDS & DIR TOOLS
	16:00 - 17:00	1.00	CSG	12	A	P		MOVE CATWALK & PIPE RACKS /// MOVE CSG CLOSE TO RIG /// RIG CSG TOOLS /// PJSM
	17:00 - 21:00	4.00	CSG	12	C	P		RUN 65 JTS, 9-5/8", 36#, J-55, LT&C CSG /// SHOE SET @ 2868', BAFFLE @ 2821'
	21:00 - 22:00	1.00	CSG	01	E	P		RUN 200' OF 1" PIPE DN BACKSIDE /// RIG DN & MOVE CARRIER OFF WELL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE	Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD	Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING	Start Date: 6/11/2011	End Date: 10/7/2011
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:00 - 0:00	2.00	CSG	12	E	P		PJSM W/ PRO PETRO CMT CREW /// PUMP 110 BBL'S WATER AHEAD /// PUMPM 20 BBL'S GEL WATER SPACER /// LEAD= 250sx CLASS G CMT @ 11.0 WT & 3.82 YIELD /// TAIL = 200sx CLASS G CMT @ 15.8 WT & 1.15 YIELD /// DROP PLUG & DISPLACE W/ 217 BBL'S WATER /// PLUG DN @ 23:45 7/10/2011 /// BUMP PLUG W/ 1070 PSI /// FINAL LIFT WAS 580 PSI /// CHECK FLOATS- HELD W/ 1.5 BBL'S BACK TO TRUCK /// FULL RETURNS THRU OUT JOB /// 32 BBL'S CMT TO SURFACE
7/11/2011	0:00 - 0:30	0.50	CSG	12	E	P		PUMP 1" TOP OUT W/ 110 SX CMT @ 15.8 WT & 1.15 YIELD
	0:30 - 2:00	1.50	CSG	13	A	P		WOC /// CMT FELL 35'
	2:00 - 2:30	0.50	CSG	12	E	P		PUMP SECOND TOP OUT W 30sx CMT @ 15.8 WT. & 1.15 YIELD /// CMT TO SURFACE & STAYED /// RELEASE RIG @ 02:30 07/11/2011 TO THE NBU 921-18F1CS
9/25/2011	6:00 - 7:00	1.00	DRLPRO	01	C	P		SKID RIG TO THE NBU 921-18F1BS, LEVEL & CENTER RIG
	7:00 - 10:00	3.00	DRLPRO	14	A	P		NIPPLE UP BOP AND STRATA
	10:00 - 17:00	7.00	DRLPRO	15	A	P		TEST BOPE, RAMS & ALL VALVES 250 LOW-5000 HIGH, ANN 2500, CASING 1500 F/ 30 MIN'S, STRATA 250-3000
	17:00 - 17:30	0.50	DRLPRO	14	B	P		INSTALL WEAR BUSHING, PRE-SPUD INSPECTION
	17:30 - 19:30	2.00	DRLPRO	06	A	P		P/U BIT #1, MM, DIR TOOLS & SCRIBE, BHA, D/P TO TOP OF CEMENT @ 2768'
	19:30 - 21:00	1.50	DRLPRO	09	A	P		CUT & SLIP 60' DRLG LINE
	21:00 - 23:00	2.00	DRLPRO	14	B	P		GHANGE OUT SAVER SUB & INSTALL ROT RUBBER
	23:00 - 0:00	1.00	DRLPRO	02	F	P		DRLG CEMENT, F/E & OPEN HOLE TO 2915' FLOAT @ 2839' SHOE @ 2886'
9/26/2011	0:00 - 17:30	17.50	DRLPRO	02	D	P		DRLG F/2915 TO 5425', 2510' @ 143.4' PH WOB / 18-20, RPM 55, MM 164 SPM 200 - GPM 586 MW 8.4, VIS 26 NOV ON CONVENTIONAL TRQ ON/OFF = 9-7 K PSI ON /OFF = 1900-1500 , DIFF 150-500 PU/SO/RT =165-135-115 SLIDE = 295' IN 4.14 HRS = 71.25' PH ROT = 2215' IN 13.36 HRS = 165.8' PH STRATA OFF LINE 0 CONN FLARE, 0 B/G FLARE 4.75 N & 3.8' W OF TARGET CENTER SERVICE RIG, F/T ANN & HCR, BOP DRLG 70 SEC
	17:30 - 18:00	0.50	DRLPRO	07	A	P		

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011		Spud Date: 7/8/2011	
Project: UTAH-UINTAH		Site: NBU 921-18D PAD			Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING		Start Date: 6/11/2011		End Date: 10/7/2011	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)			UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/W/0/1827/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DRLG F/ 5425' TO 6185', 760' @ 126.6' PH WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 MW 8.4, VIS 26 NOV ON CONVENTIONAL TRQ ON/OFF = 10-8 K PSI ON /OFF = 2100-1700, DIFF 150-500 PU/SO/RT =175-130-152 SLIDE = 93' IN 1.08 HRS = 86.1' PH ROT = 667' IN 4.92 HRS = 135.6' PH STRATA OFF LINE 0 CONN FLARE, 0 B/G FLARE 15.5 N & 14.8 W OF TARGET CENTER
9/27/2011	0:00 - 15:30	15.50	DRLPRO	02	D	P		DRLG F/ 6185' TO 7607', 1422' @ 91.7' PH WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 MW 8.4, VIS 26 NOV ON CONVENTIONAL, DEWATER F/ 4 HRS TRQ ON/OFF = 11-9 K PSI ON /OFF = 2100-1700, DIFF 150-500 PU/SO/RT = 210-120-165 SLIDE = 0 ROT = 100% STRATA OFF LINE 5' CONN FLARE, 0 B/G FLARE 2.24 N & 16.44 W OF TARGET CENTER
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG, F/T HCR & CROWN-O-MATIC, BOP DRLG 99 SEC
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRLG F/ 7607' TO 7996', 389' @ 48.6' PH , WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 MW 8.7, VIS 26 NOV ON CONVENTIONAL TRQ ON/OFF = 11-9 K PSI ON /OFF = 2100-1800, DIFF 150-500 PU/SO/RT = 220-155-178 SLIDE = 90' IN 2.49 HRS = 36.1' PH ROT = 299' IN 5.51 HRS = 54.3' PH STRATA OFF LINE 10' CONN FLARE, 5' B/G FLARE 10' N & 13' W OF TARGET CENTER
9/28/2011	0:00 - 13:30	13.50	DRLPRO	02	D	P		DRLG F/ 7996' TO 8935', 939' @ 69.5' PH WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 MW 8.7, VIS 26 NOV ON CONVENTIONAL TRQ ON/OFF = 11-9 K PSI ON /OFF = 2100-1800, DIFF 150-500 PU/SO/RT = 220-148-185 SLIDE = 0 ROT = 100% STRATA OFF LINE 10' CONN FLARE, 5' B/G FLARE 15.5 N & 8.18 W OF TARGET CENTER
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG, F/T ANN & HCR

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD		Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING	Start Date: 6/11/2011	End Date: 10/7/2011	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NVW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 22:30	8.50	DRLPRO	02	D	P		DRLG F/ 8935' TO 9419', 484' @ 56.9' PH WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 START LIGHT MUD UP @ 9200' MW 9.2, VIS 36 NOV ON CONVENTIONAL TRQ ON/OFF = 13-11 K PSI ON /OFF = 2100-1800, DIFF 150-500 PU/SO/RT = 220-148-185 SLIDE = 0 ROT = 100% STRATA ON LINE @ 9150'. AP 105 DRLG, 250 CONN 10' CONN FLARE, 5' B/G FLARE 12' N & 1.5' W OF TARGET CENTER
9/29/2011	22:30 - 0:00	1.50	DRLPRO	22	L	Z		CHECK ALL SURFACE EQUIPMENT F/ PSI LOSS, PUMP FLAG, POOH F/ HOLE IN PIPE
	0:00 - 3:00	3.00	DRLPRO	22	L	Z		POOH 16 STNDS & 2 JTS FOR HOLE ON DP, L/D DP, TIH
	3:00 - 15:00	12.00	DRLPRO	02	D	P		DRLG F/ 9419 TO 9885, 466' @ 38.8 PH WOB / 20-22, RPM 55, MM 164 SPM 200 - GPM 586 MW 9.4+, VIS 34 NOV OFF LINE TRQ ON/OFF = 13-11 K PSI ON /OFF = 2100-1800, DIFF 150-500 PU/SO/RT = 255-159-198 SLIDE = 55', 2.92 HRS @ 18.8 PH ROT = 411', 9.08 HRS @ 45.3 PH STRATA ON LINE AP 105 DRLG, 250 CONN 10' CONN FLARE, 5' B/G FLARE 3.13 N & 2' E OF TARGET CENTER
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG, F/T ANN & HCR
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRLG F/ 9885, WOB / 22-24, RPM 55, MM 156 SPM 190 - GPM 556 MW 10.2, VIS 38 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 2800-2500, DIFF 150-300 PU/SO/RT = 255-165-205 SLIDE = 0 ROT = 100% ROT STRATA ON LINE AP 105 DRLG, 250 CONN 10' CONN FLARE, 5' B/G FLARE 8.7 S & 2.8 E OF TARGET CENTER

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD		Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING	Start Date: 6/11/2011	End Date: 10/7/2011	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/W/0/1827/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/30/2011	0:00 - 15:00	15.00	DRLPRO	02	C	P		DRLG F/ 10180' TO 10649', 469' @ 31.3' PH WOB / 22-24, RPM 55, MM 156 SPM 190 - GPM 556 MW 10.6, VIS 38 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 2800-2500, DIFF 150-300 PU/SO/RT = 255-144-200 SLIDE = 0 ROT = 100% ROT STRATA ON LINE AP 105 DRLG, 250 CONN 10' CONN FLARE, 5' B/G FLARE 23.2 S & 4.3 E OF TARGET CENTER SERVICE RIG
	15:00 - 15:30	0.50	DRLPRO	07	A	P		
	15:30 - 17:30	2.00	DRLPRO	02	D	P		DRLG F/10649 TO 10682', 33' @ 16.5' PH WOB / 22-24, RPM 55, MM 156 SPM 190 - GPM 556 MW 10.6, VIS 38 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 2800-2500, DIFF 150-300 PU/SO/RT = 255-144-200 SLIDE = 0 ROT = 100% ROT STRATA ON LINE AP 105 DRLG, 250 CONN 10' CONN FLARE, 5' B/G FLARE 23.2' S & 4.3' E OF TARGET CENTER RAISE MW TO 11.1 F/ TFNB
10/1/2011	17:30 - 19:00	1.50	DRLPRO	05	B	P		TFNB & MM
	19:00 - 0:00	5.00	DRLPRO	06	A	P		WORKING TIGHT HOLE
	0:00 - 4:00	4.00	DRLPRO	06	A	X		WORKING TIGHT HOLE WITH SURFACE JARS
	4:00 - 8:00	4.00	DRLPRO	19	A	P		RIGGING UP ROT TABLE AND FREE POINT CREW
	8:00 - 9:00	1.00	DRLPRO	19	A	P		RETRIEVE MWD TOOL
	9:00 - 10:30	1.50	DRLPRO	19	A	P		FISHING FREE POINT
	10:30 - 15:30	5.00	DRLPRO	19	A	P		P/U FISHING TOOLS
	15:30 - 17:00	1.50	DRLPRO	19	A	P		TIH W/ FISHING TOOLS, SCREW IN SUB, JARS, ENERGIZER
10/2/2011	17:00 - 19:00	2.00	DRLPRO	06	J	P		CIRC OVER & CLEAN TOP OF FISH
	19:00 - 19:30	0.50	DRLPRO	05	F	P		SCREW IN & JAR FISH FREE
	19:30 - 20:30	1.00	DRLPRO	19	A	P		POOH W/ FISH, L/D FISHING TOOLS & FISH
	20:30 - 0:00	3.50	DRLPRO	06	A	P		TIH W/ BIT #2, TO 4100'
	0:00 - 3:00	3.00	DRLPRO	06	A	X		REAM F/ 4100 TO 8182'
	3:00 - 17:30	14.50	DRLPRO	03	A	X		SERVICE RIG
	17:30 - 18:00	0.50	DRLPRO	07	A	P		REAM F/ 8182 TO 10682', 180' FILL, 30' BOTTOMS UP FLARE, RAISE MW TO 12 PPG, VIS TO 45, LOST 900 BBLS TO PACK OFF'S
	18:00 - 22:30	4.50	DRLPRO	03	A	X		

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD		Rig Name No: PROPETRO 12/12, PIONEER 54/54
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Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:30 - 0:00	1.50	DRLPRO	02	D	P		DRLG F/10682' TO 10744', 62' @ 41' PH WOB / 18-20, RPM 55, MM 156 SPM 190 - GPM 556 MW 12, VIS 45 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 3300-2900, DIFF 150-300 PU/SO/RT = 255-144-200 SLIDE = 0 ROT = 100% ROT STRATA OFF LINE
10/3/2011	0:00 - 11:00	11.00	DRLPRO	02	D	P		30.5 S & 6.3 E OF TARGET CENTER DRLG F/10744' TO 10997', 253' @ 23' PH WOB / 18-22, RPM 55, MM 156 SPM 190 - GPM 556 MW 12.4, VIS 45 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 3300-2900, DIFF 150-300 PU/SO/RT = 235/168/204 SLIDE = 0 ROT = 100% ROT STRATA OFF LINE
	11:00 - 12:00	1.00	DRLPRO	22	G	X		46' S & 11.25 E OF TARGET CENTER WORKED PIPE, LOST @ 300 BBLS
	12:00 - 14:30	2.50	DRLPRO	02	D	P		DRLG F/10997' TO 11028', 31' @ 12.4' PH WOB / 18-22, RPM 55, MM 156 SPM 190 - GPM 556 MW 12.4, VIS 45 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 3300-2900, DIFF 150-300 PU/SO/RT = 235/168/204 SLIDE = 0 ROT = 100% ROT STRATA OFF LINE
	14:30 - 15:00	0.50	DRLPRO	07	A	P		46' S & 11.25 E OF TARGET CENTER SERVICE RIG, BOPE DRILL 88 SEC, F/T ANN & HCR
	15:00 - 0:00	9.00	DRLPRO	02	D	P		DRLG F/11028' TO 11280', 252' @ 28' PH WOB / 18-22, RPM 55, MM 156 SPM 180 - GPM 527 MW 12.3, VIS 41 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 3600-000, DIFF 150-300 PU/SO/RT = 280/160/200 SLIDE = 0 ROT = 100% ROT STRATA OFF LINE 54.25' S & 13.9' E OF TARGET CENTER

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011		Spud Date: 7/8/2011	
Project: UTAH-UINTAH		Site: NBU 921-18D PAD		Rig Name No: PROPETRO 12/12, PIONEER 54/54	
Event: DRILLING		Start Date: 6/11/2011		End Date: 10/7/2011	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/4/2011	0:00 - 17:30	17.50	DRLPRO	02	D	P		DRLG F/ 11280' TO 11700', 430' @ 24' PH WOB / 18-22, RPM 55, MM 156 SPM 180 - GPM 527 MW 12.4, VIS 40 NOV OFF LINE TRQ ON/OFF = 15-13 K PSI ON /OFF = 3600-000, DIFF 150-300 PU/SO/RT = 280/160/200 SLIDE = 0 ROT = 100% ROT STRATA OFF LINE 65.12' S & 18.10' E OF TARGET CENTER
	17:30 - 19:30	2.00	DRLPRO	05	F	P		CIRC BTMS UP/ PUMPED HIGH VIS SWEEP
	19:30 - 0:00	4.50	DRLPRO	06	E	P		PUMPED 12 STNDS OFF BTM, POOH
10/5/2011	0:00 - 3:00	3.00	DRLPRO	06	E	P		WPER TRIP TO SHOE
	3:00 - 4:00	1.00	DRLPRO	09	A	P		SLIP AND CUT 100' DRILL LINE
	4:00 - 14:30	10.50	DRLPRO	06	A	P		POOH FOR LOGS, REAMING
	14:30 - 16:30	2.00	DRLPRO	05	F	P		CIRC BTMS UP, HIGH VIS SWEEP
	16:30 - 19:30	3.00	DRLPRO	06	A	P		POOH FOR LOGS, REAMING
	19:30 - 20:00	0.50	DRLPRO	05	F	P		COND MUD, BUILD PILL
	20:00 - 0:00	4.00	DRLPRO	06	A	P		POOH FOR LOGS, REAMING
10/6/2011	0:00 - 2:30	2.50	DRLPRO	06	A	P		POOH FOR LOGS
	2:30 - 5:00	2.50	DRLPRO	11	C	X		HPJSM W/ RIG & LOGGING CREWS, R/U & RUN OPEN HOLE LOGS, BRIDGED OUT & LOG UP F/ 4740', R/D LOGGING CREWS P/U BHA TO WPE HOLE L/D BHA PULLED WEAR BUSHING WAITING FOR CASING CREW
	5:00 - 6:00	1.00	DRLPRO	06	F	P		HPJSM W/ RIG & CASING CREWS, R/U & RUN 275 JTS + 3 MARKERS SHOE @ 11693.63 FLOAT @ 11649.78 B/H MARKER @ 11139.96 MESA MARKER @ 8412.85 WASATCH MARKER @ 5132.89 15 CENTRALIZER'S ON BOTTOM
	6:00 - 7:00	1.00	DRLPRO	06	F	P		CIRC OUT GAS, 30, FLARE FOR 10 MIN'S ON BOTTOMS UP
	7:00 - 7:30	0.50	DRLPRO	14	B	P		HPJSM W/ RIG & CEMENTER'S, R/U & PSI LINE'S TO 5366, PUMP 5 BBL WATER SPACER, 20 SKS SCAV 11.6 PPG 2.53 YLD, LEAD 770 SKS 12.6 PPG 1.93 YLD, TAIL 1355 SKS 14.3 PPG 1.31 YLD, DROP PLUG & DISPLACE W/ 181.1 BBLs CLAYCARE WATER, FULL RETURNS THOUGH OUT JOB , FLOATS HELD, 2 BBLs BACK TO TRUCK, EST TOP OF TAIL CEMENT @ 4612', PLUG @ 11653'
	7:30 - 9:30	2.00	DRLPRO	21	E	P		FINISHED CEMENT, R/D
	9:30 - 21:00	11.50	DRLPRO	12	C	P		SET C-22 SLIPS W/ 120K, N/D & MAKE ROUGH CUT ON CASING R/D & PREPARE TO SKID RIG, CLEAN PITS & RELEASE RIG TO THE NBU 921-18F1CS @ 06:00 10/07/11
	21:00 - 23:00	2.00	DRLPRO	05	D	P		
	23:00 - 0:00	1.00	DRLPRO	12	E	P		
10/7/2011	0:00 - 2:30	2.50	DRLPRO	12	E	P		
	2:30 - 3:30	1.00	DRLPRO	14	B	P		
	3:30 - 6:00	2.50	DRLPRO	01	C	P		

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-18F1BS BLUE	Wellbore No.	OH
Well Name	NBU 921-18F1BS	Wellbore Name	NBU 921-18F1BS
Report No.	1	Report Date	12/22/2011
Project	UTAH-UINTAH	Site	NBU 921-18D PAD
Rig Name/No.		Event	COMPLETION
Start Date	12/22/2011	End Date	1/23/2012
Spud Date	7/8/2011	Active Datum	RKB @4,730.00usft (above Mean Sea Level)
UWI	NW/NW/09/S/21/E/18/00/26/PM/N878/W/0/1827/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly	PRODUCTION CASING	Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	11,146.0 (usft)-11,480.0 (u	Start Date/Time	12/27/2011 12:00AM
No. of Intervals	17	End Date/Time	12/27/2011 12:00AM
Total Shots	72	Net Perforation Interval	23.00 (usft)
Avg Shot Density	3.13 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/27/2011 12:00AM	MESAVERDE/			11,146.0	11,147.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/27/2011 12:00AM	MESAVERDE/			11,164.0	11,166.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,174.0	11,176.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,188.0	11,190.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,219.0	11,220.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,233.0	11,234.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,251.0	11,252.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,262.0	11,263.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,281.0	11,282.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,320.0	11,321.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,329.0	11,330.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,339.0	11,340.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,426.0	11,427.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,436.0	11,438.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/2011 12:00AM	MESAVERDE/			11,450.0	11,452.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/27/201 1 12:00AM	MESAVERDE/			11,465.0	11,467.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/27/201 1 12:00AM	MESAVERDE/			11,479.0	11,480.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots**3.1 Wellbore Schematic**

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011		Spud Date: 7/8/2011	
Project: UTAH-UINTAH		Site: NBU 921-18D PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION		Start Date: 12/22/2011		End Date: 1/23/2012	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)			UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/W/0/1827/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/16/2011	12:00 - 14:00	2.00	COMP	33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 31 PSI. 1 ST PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 80 PSI. 2 ND PSI TEST T/ 3500 PSI. HELD FOR 30 MIN LOST 42 PSI. PSI TEST T/ 9000 PSI. HELD FOR 30 MIN. LOST 109 PSI. NO COMMUNICATION WITH SURFACE CSG SURFACE HAS MIGRATION BLEED OFF PSI. MOVE T/ NEXT WELL. SWMFW
12/27/2011	8:00 - 12:00	4.00	COMP	37	B	P		HSM, REVIEW JSA RIGGINGN UP MIRU 1ST SHOOT LOWER MESAVERDE, USING 3-1/8 EXPEND, 23 GRM, 0.23" HOLE, AS PERSAY IN PROCEDURE.
12/28/2011	7:00 - 12:00	5.00	COMP	46	E	Z		WAITING ON BLENDER
	12:00 - 13:30	1.50	COMP	33		P		HSM, HIGH PRESSURE LINES / PRESSURE TEST SURFACE LINES TO 9,500#, SET POP OFFS @=8,800#
	13:30 - 17:30	4.00	COMP	36	B	P		PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ TLC MESH SAND IN ALL STGS & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S. REFER TO STIM PJR FOR FLUID, SAND AND CHEMICL VOLUME PUM'D
12/29/2011	6:15 - 6:30	0.25	COMP	48		P		FRAC STG #1] WHP=1,980#, BRK DN PERFS=4,845#, @=6.4 BPM, INJ RT=50.5, INJ PSI=7,373#, INITIAL ISIP=4,010#, INITIAL FG=.79, FINAL ISIP=4,068#, FINAL FG=.79, AVERAGE RATE=49.6, AVERAGE PRESSURE=7,106#, MAX RATE=51, MAX PRESSURE=8,091#, NET PRESSURE INCREASE=58#, 23/24 97% CALC PERFS OPEN. X OVER TO WIRE LINE SWMFN. HSM, REVIEW FRAC

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE		Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD		Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 12/22/2011	End Date: 1/23/2012	
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0	

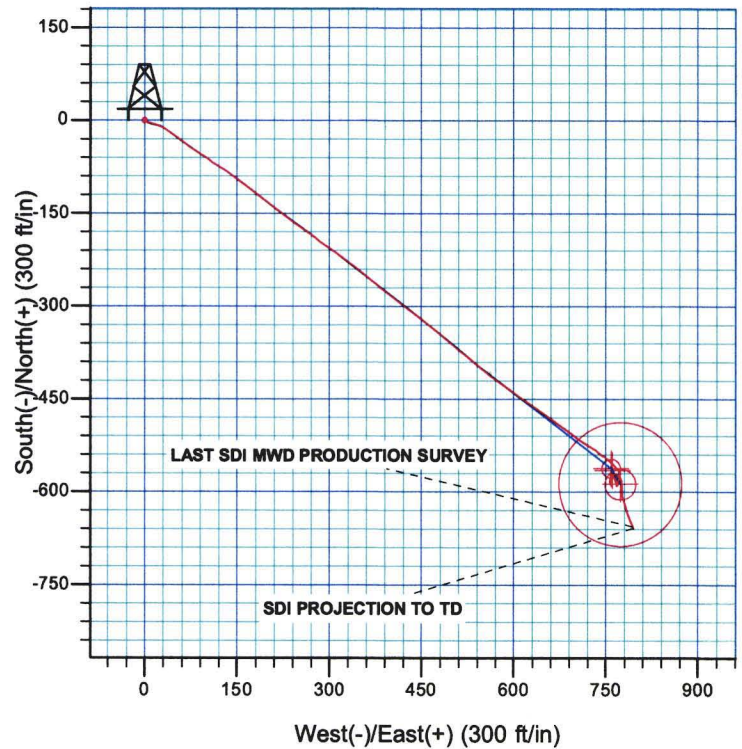
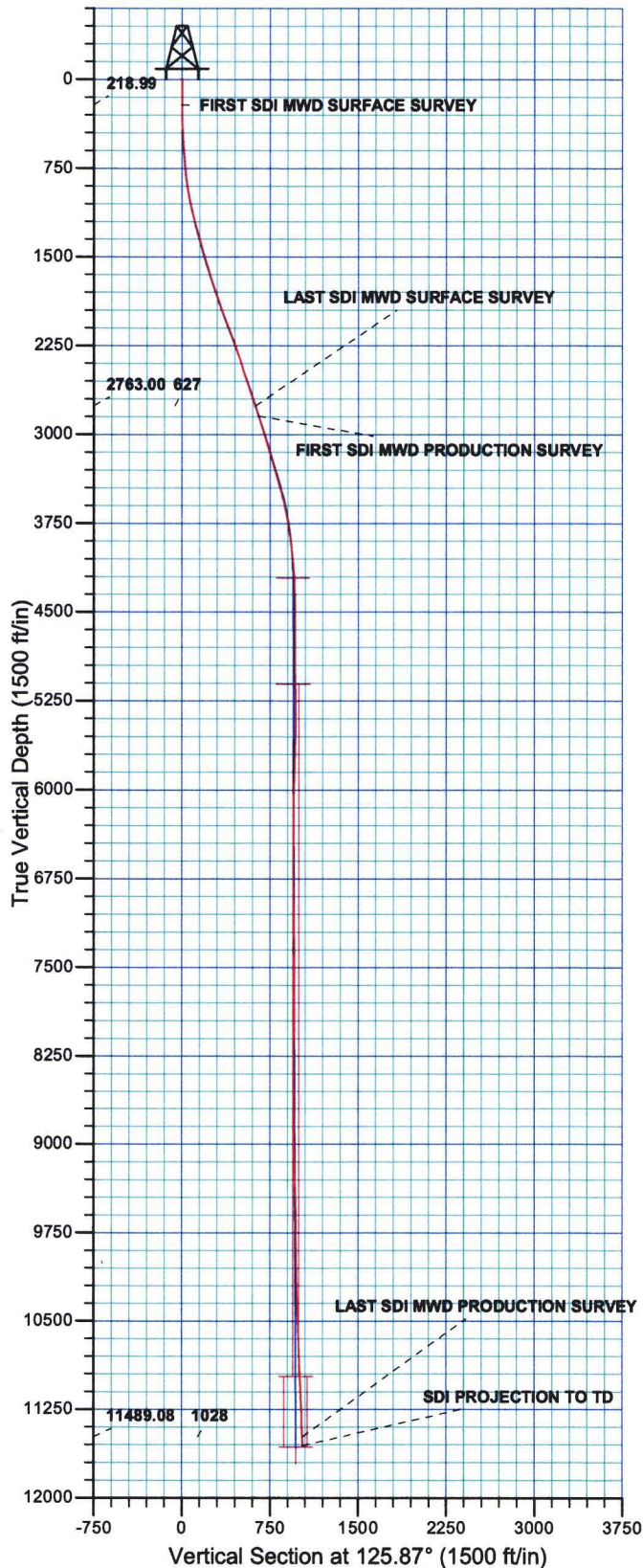
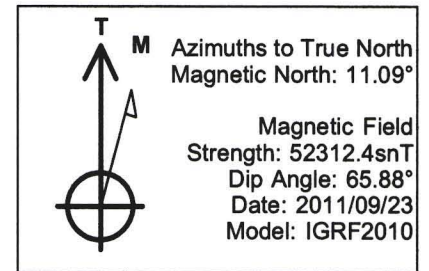
Date	Time Start-End	Duration (hr)	Phase	Code	Sub. Code	P/U	MD From (usft)	Operation
	6:30 - 17:00	10.50	COMP	36	B	P		PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=11,370', PERF LOWER MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW
								FRAC STG #2] WHP=2,220#, BRK DN PERFS=5,393#, @=4.8 BPM, INJ RT=50, INJ PSI=6,995#, INITIAL ISIP=3,941#, INITIAL FG=.79, FINAL ISIP=4,076#, FINAL FG=.80, AVERAGE RATE=48.5, AVERAGE PRESSURE=7,281#, MAX RATE=50.5, MAX PRESSURE=8,154#, NET PRESSURE INCREASE=135#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE. SWMFN.
12/30/2011	7:00 - 7:15	0.25	COMP	48		P		HSM, STAYING ALERT DURING LONG FRACS
	7:15 - 7:15	0.00	COMP	36	B	P		PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=11,209', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW
								FRAC STG #3] WHP=3,328#, BRK DN PERFS=5,671#, @=4.7 BPM, INJ RT=38.5, INJ PSI=7,985#, INITIAL ISIP=4,621#, INITIAL FG=.85, FINAL ISIP=4,000#, FINAL FG=.80, AVERAGE RATE=44.3, AVERAGE PRESSURE=8,112#, MAX RATE=51, MAX PRESSURE=8,599#, NET PRESSURE INCREASE=-621#, 15/24 61% CALC PERFS OPEN. X OVER TO WIRE LINE
								P/U RIH W/ HALIBURTON 8K CBP, SET FOR TOP KILL @=11,096'
								TOTAL FLUID PUMP'D=14,429 BBLs TOTAL SAND PUMP'D=327,357#
1/14/2012	11:00 - 12:00	1.00	COMP	33	D	P		R/U B&C QUICK TEST TO BRAIDEN HEAD VALVE, PUMP TO 1000 PSI, CANT PUMP INTO SURFACE AT 1000 PSI. R/D B & C
1/21/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, P/U TBG, 0 PSI ON WELL
	7:30 - 15:00	7.50	COMP	31	I	P		N/D WELL HEAD, N/U BOPS, R/U FLOOR P/U 3 7/8" SBB, POBS, 1.875 XN NIPPLE 348 JTS L-80 TBG TAG @ 11064'
								PSI TEST BOPS TO 3000 PSI WATCH 15 MIN 0 LOSS 3 PM SWI, SDFN
1/23/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ HIGH PSI. 0 PSI ON WELL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-18F1BS BLUE	Spud Conductor: 6/23/2011	Spud Date: 7/8/2011
Project: UTAH-UINTAH	Site: NBU 921-18D PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 12/22/2011	End Date: 1/23/2012
Active Datum: RKB @4,730.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/18/0/0/26/PM/N/878/NW/0/1827/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 10:30	3.00	COMP	44	C	P		EOT @ 11064', R/U POWER SWIVEL, BREAK CIRC CONV, CBP #1 @ 11096' 20' SAND, 700 PSI KICK, 200 PSI FCP 15 MIN D/U CBP # 2 @ 11209' 20' SAND, 700 PSI KICK, 700 PSI FCP 5 MIN TO D/U CBP # 3 @ 11370' 35'SAND, XXXPSI KICK, 1050 PSI FCP 13 MIN TO D/U TAG @ 11508' CLEAN 96' SAND TO 11604' CIRC CLEAN L/D 13 JTS TBG, LAND WELL @ 11180.22' 1-4.5" TUBING HANGER = .83' 352- JTS L-80 TBG = 11177.19' 1-1.875"POBS W/ XN =2.2' R/D FLOOR N/D BOPS, N/U WELL HEAD PUMP OFF BIT @ 4500 PSI R/U B & C PSI TEST HAL 9000 TO 4500 PSI 167# LOSS 15 MIN R/D B & C FLOW TO PIT ,UNLOAD TBG 1 PM TURN OVER TO FBC & PRODUCTION TBG FLOWING @ 4500 PSI ON 18 CHOKE 3 MMCF CSG PSI 5000# RACK OUT EQUIP RDMO MIRU ON NBU 921-18F1BS 3 PM SDFN
1/24/2012	7:00 -		PROD	50				WELL IP'D ON 1/24/12 - 3661 MCFD, 0 BOPD, 1200 BWPD, CP 4800 #, FTP 4605#, CK 20/64", LP 303#, 24 HRS

WELL DETAILS: NBU 921-18F1BS					
GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14544043.01	2032650.05	40° 2' 27.431 N	109° 35' 55.122 W



PROJECT DETAILS: Uintah County, UT UTM12	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SECTION 18 T9S R21E
System Datum:	Mean Sea Level

Design: OH (NBU 921-18F1BS/OH)
Created By: RobertScott Date: 14:28, October 06 2011



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 921-18D PAD

NBU 921-18F1BS

OH

Design: OH

Standard Survey Report

06 October, 2011



Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
Well: NBU 921-18F1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Project: Uintah County, UT UTM12
Map System: Universal Transverse Mercator (US Survey Feet) **System Datum:** Mean Sea Level
Geo Datum: NAD 1927 - Western US
Map Zone: Zone 12N (114 W to 108 W)

Site: NBU 921-18D PAD, SECTION 18 T9S R21E
Site Position: **Northing:** 14,544,032.20 usft **Latitude:** 40° 2' 27.330 N
From: Lat/Long **Easting:** 2,032,611.30 usft **Longitude:** 109° 35' 55.622 W
Position Uncertainty: 0.00 ft **Slot Radius:** 13.200 in **Grid Convergence:** 0.90 °

Well: NBU 921-18F1BS, 878 FNL 1827 FWL
Well Position: **+N/-S** 0.00 ft **Northing:** 14,544,043.00 usft **Latitude:** 40° 2' 27.431 N
+E/-W 0.00 ft **Easting:** 2,032,650.05 usft **Longitude:** 109° 35' 55.122 W
Position Uncertainty: 0.00 ft **Wellhead Elevation:** ft **Ground Level:** 4,711.00 ft

Wellbore: OH
Magnetics: **Model Name** **Sample Date** **Declination** **Dip Angle** **Field Strength**
 (°) (°) (nT)
 IGRF2010 2011/09/23 11.09 65.88 52,312

Design: OH
Audit Notes:
Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00
Vertical Section: **Depth From (TVD)** **+N/-S** **+E/-W** **Direction**
 (ft) (ft) (ft) (°)
 0.00 0.00 0.00 125.87

Survey Program **Date** 2011/10/06

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
15.00	2,856.00	Survey #1 SDI MWD SURFACE (OH)	MWD SDI	MWD - Standard ver 1.0.1
2,944.00	11,700.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
219.00	0.76	163.39	218.99	-1.30	0.39	1.07	0.37	0.37	0.00
FIRST SDI MWD SURFACE SURVEY									
304.00	1.31	111.61	303.98	-2.19	1.45	2.46	1.21	0.65	-60.92
391.00	2.88	100.09	390.92	-2.94	4.53	5.39	1.86	1.80	-13.24
481.00	3.77	106.77	480.77	-4.19	9.59	10.23	1.08	0.99	7.42
571.00	3.56	105.27	570.58	-5.78	15.12	15.64	0.26	-0.23	-1.67
661.00	4.53	108.10	660.36	-7.62	21.19	21.64	1.10	1.08	3.14
751.00	5.71	116.98	750.00	-10.76	28.56	29.45	1.58	1.31	9.87

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
Well: NBU 921-18F1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
841.00	7.11	124.77	839.44	-15.97	37.12	39.44	1.83	1.56	8.66
931.00	8.83	127.51	928.56	-23.35	47.18	51.91	1.96	1.91	3.04
1,021.00	10.82	126.96	1,017.24	-32.64	59.41	67.27	2.21	2.21	-0.61
1,111.00	12.53	123.75	1,105.38	-43.14	74.28	85.47	2.03	1.90	-3.57
1,201.00	14.27	121.93	1,192.92	-54.43	91.81	106.29	1.99	1.93	-2.02
1,291.00	15.57	125.24	1,279.89	-67.27	111.09	129.44	1.73	1.44	3.68
1,381.00	16.03	125.00	1,366.49	-81.37	131.14	153.94	0.52	0.51	-0.27
1,471.00	16.24	125.29	1,452.94	-95.76	151.59	178.95	0.25	0.23	0.32
1,561.00	16.73	127.91	1,539.24	-110.99	172.08	204.48	0.99	0.54	2.91
1,651.00	17.07	128.46	1,625.36	-127.17	192.64	230.62	0.42	0.38	0.61
1,741.00	17.62	128.61	1,711.26	-143.51	213.92	257.44	0.87	0.61	-2.06
1,831.00	18.18	125.92	1,796.91	-159.87	236.23	285.10	0.67	0.62	-0.77
1,981.00	20.63	125.93	1,938.38	-189.11	276.58	334.93	1.63	1.63	0.01
2,011.00	20.69	124.89	1,966.45	-195.24	285.21	345.52	1.24	0.20	-3.47
2,101.00	20.67	127.05	2,050.65	-213.90	310.93	377.30	0.85	-0.02	2.40
2,191.00	20.84	127.10	2,134.81	-233.13	336.37	409.18	0.19	0.19	0.06
2,281.00	20.11	128.23	2,219.12	-252.36	361.30	440.65	0.92	-0.81	1.26
2,371.00	19.08	128.45	2,303.91	-271.08	384.97	470.80	1.15	-1.14	0.24
2,461.00	18.78	126.91	2,389.04	-288.93	408.07	499.98	0.65	-0.33	-1.71
2,551.00	18.94	126.05	2,474.21	-306.23	431.47	529.07	0.36	0.18	-0.96
2,641.00	18.95	128.10	2,559.34	-323.84	454.78	558.28	0.74	0.01	2.28
2,731.00	19.06	129.70	2,644.43	-342.24	477.58	587.55	0.59	0.12	1.78
2,821.00	18.30	129.18	2,729.69	-360.56	499.84	616.31	0.86	-0.84	-0.58
2,856.00	17.49	129.80	2,763.00	-367.40	508.14	627.05	2.38	-2.31	1.77
LAST SDI MWD SURFACE SURVEY									
2,944.00	16.45	129.55	2,847.16	-383.80	527.91	652.67	1.18	-1.18	-0.28
FIRST SDI MWD PRODUCTION SURVEY									
3,089.00	17.41	128.60	2,985.88	-410.40	560.69	694.83	0.69	0.66	-0.66
3,184.00	17.50	125.00	3,076.51	-427.46	583.50	723.31	1.14	0.09	-3.79
3,279.00	17.67	126.67	3,167.07	-444.27	606.77	752.01	0.56	0.18	1.76
3,373.00	16.14	122.90	3,257.01	-459.88	629.18	779.32	2.00	-1.63	-4.01
3,468.00	16.36	126.40	3,348.21	-475.00	651.04	805.89	1.06	0.23	3.68
3,563.00	16.80	126.58	3,439.26	-491.12	672.83	833.00	0.47	0.46	0.19
3,658.00	14.25	125.88	3,530.79	-506.15	693.33	858.42	2.69	-2.68	-0.74
3,753.00	12.25	124.17	3,623.26	-518.67	711.15	880.19	2.15	-2.11	-1.80
3,848.00	10.38	121.45	3,716.41	-528.80	726.79	898.80	2.05	-1.97	-2.86
3,943.00	9.06	126.82	3,810.04	-537.74	740.08	914.81	1.68	-1.39	5.65
4,037.00	6.87	124.41	3,903.13	-545.36	750.64	927.83	2.36	-2.33	-2.56
4,132.00	6.02	134.77	3,997.53	-552.08	758.87	938.44	1.51	-0.89	10.91
4,227.00	4.84	137.04	4,092.10	-558.52	765.14	947.29	1.26	-1.24	2.39
4,322.00	3.43	143.01	4,186.85	-563.72	769.58	953.94	1.55	-1.48	6.28
4,417.00	1.58	156.99	4,281.76	-567.20	771.80	957.77	2.04	-1.95	14.72
4,512.00	0.79	173.69	4,376.74	-569.05	772.38	959.34	0.90	-0.83	17.58

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
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Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (%/100ft)	Build Rate (%/100ft)	Turn Rate (%/100ft)
4,606.00	1.14	166.30	4,470.73	-570.61	772.68	960.48	0.39	0.37	-7.86
4,701.00	0.53	217.19	4,565.72	-571.87	772.63	961.19	0.95	-0.64	53.57
4,796.00	1.06	191.88	4,660.71	-573.08	772.19	961.54	0.66	0.56	-26.64
4,891.00	1.49	186.34	4,755.68	-575.17	771.87	962.50	0.47	0.45	-5.83
4,986.00	1.58	202.25	4,850.65	-577.61	771.24	963.42	0.46	0.09	16.75
5,080.00	1.67	197.95	4,944.61	-580.11	770.32	964.15	0.16	0.10	-4.57
5,175.00	2.07	185.68	5,039.56	-583.14	769.73	965.44	0.59	0.42	-12.92
5,271.00	1.93	186.52	5,135.50	-586.47	769.37	967.10	0.15	-0.15	0.88
5,366.00	1.32	201.37	5,230.46	-589.08	768.79	968.16	0.78	-0.64	15.63
5,461.00	0.53	245.14	5,325.45	-590.28	768.00	968.22	1.06	-0.83	46.07
5,556.00	0.79	346.48	5,420.45	-589.83	767.44	967.51	1.09	0.27	106.67
5,651.00	2.37	348.59	5,515.41	-587.27	766.90	965.57	1.66	1.66	2.22
5,746.00	1.76	346.83	5,610.35	-583.92	766.18	963.02	0.65	-0.64	-1.85
5,841.00	1.77	338.72	5,705.30	-581.13	765.32	960.69	0.26	0.01	-8.54
5,936.00	1.41	337.16	5,800.27	-578.69	764.33	958.46	0.38	-0.38	-1.64
6,031.00	1.23	329.69	5,895.24	-576.73	763.36	956.52	0.26	-0.19	-7.86
6,126.00	1.06	337.69	5,990.22	-575.04	762.51	954.84	0.25	-0.18	8.42
6,220.00	0.88	318.97	6,084.21	-573.69	761.71	953.40	0.39	-0.19	-19.91
6,315.00	0.44	289.26	6,179.20	-573.02	760.89	952.34	0.57	-0.46	-31.27
6,410.00	0.62	345.69	6,274.20	-572.40	760.41	951.60	0.55	0.19	59.40
6,505.00	0.33	276.82	6,369.20	-571.87	760.02	950.96	0.62	-0.31	-72.49
6,599.00	0.18	280.56	6,463.19	-571.81	759.60	950.59	0.16	-0.16	3.98
6,694.00	0.70	232.84	6,558.19	-572.13	758.99	950.29	0.63	0.55	-50.23
6,789.00	0.70	195.57	6,653.19	-573.04	758.37	950.32	0.47	0.00	-39.23
6,884.00	0.88	196.63	6,748.18	-574.30	758.01	950.76	0.19	0.19	1.12
6,979.00	0.97	193.99	6,843.16	-575.78	757.61	951.30	0.10	0.09	-2.78
7,073.00	0.75	200.34	6,937.15	-577.13	757.20	951.76	0.25	-0.23	6.76
7,169.00	0.97	175.88	7,033.14	-578.53	757.04	952.45	0.44	0.23	-25.48
7,263.00	1.32	187.13	7,127.12	-580.40	756.96	953.49	0.44	0.37	11.97
7,359.00	1.20	167.61	7,223.10	-582.48	757.04	954.77	0.46	-0.13	-20.33
7,453.00	1.23	187.05	7,317.08	-584.44	757.13	955.99	0.44	0.03	20.68
7,548.00	1.14	180.37	7,412.06	-586.40	757.00	957.03	0.17	-0.09	-7.03
7,643.00	0.18	210.95	7,507.05	-587.47	756.92	957.59	1.04	-1.01	32.19
7,738.00	0.70	41.15	7,602.05	-587.16	757.22	957.66	0.92	0.55	-178.74
7,832.00	1.32	16.01	7,696.04	-585.69	757.90	957.34	0.80	0.66	-26.74
7,927.00	1.58	19.26	7,791.01	-583.40	758.63	956.60	0.29	0.27	3.42
8,022.00	1.49	19.62	7,885.97	-581.00	759.48	955.88	0.10	-0.09	0.38
8,117.00	1.23	22.25	7,980.94	-578.89	760.28	955.29	0.28	-0.27	2.77
8,212.00	1.06	3.97	8,075.93	-577.07	760.73	954.59	0.42	-0.18	-19.24
8,307.00	0.79	24.27	8,170.91	-575.60	761.06	953.99	0.44	-0.28	21.37
8,402.00	0.70	23.57	8,265.91	-574.47	761.56	953.73	0.10	-0.09	-0.74
8,496.00	0.44	18.21	8,359.90	-573.60	761.90	953.50	0.28	-0.28	-5.70
8,591.00	0.79	21.37	8,454.90	-572.64	762.25	953.23	0.37	0.37	3.33
8,686.00	0.62	56.35	8,549.89	-571.75	762.92	953.24	0.48	-0.18	36.82

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Local Co-ordinate Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,781.00	0.62	90.37	8,644.88	-571.47	763.86	953.84	0.38	0.00	35.81
8,876.00	0.35	57.58	8,739.88	-571.32	764.62	954.37	0.40	-0.28	-34.52
8,971.00	0.70	116.91	8,834.88	-571.42	765.38	955.05	0.63	0.37	62.45
9,066.00	0.79	117.00	8,929.87	-571.98	766.48	956.27	0.09	0.09	0.09
9,162.00	0.70	104.96	9,025.86	-572.43	767.64	957.47	0.19	-0.09	-12.54
9,257.00	0.88	112.69	9,120.85	-572.87	768.87	958.72	0.22	0.19	8.14
9,352.00	1.32	121.22	9,215.83	-573.71	770.48	960.52	0.49	0.46	8.98
9,446.00	1.32	129.04	9,309.81	-574.96	772.25	962.68	0.19	0.00	8.32
9,541.00	1.54	146.30	9,404.78	-576.71	773.81	964.97	0.51	0.23	18.17
9,636.00	1.85	164.72	9,499.74	-579.25	774.92	967.36	0.66	0.33	19.39
9,731.00	1.23	171.75	9,594.70	-581.74	775.47	969.27	0.68	-0.65	7.40
9,826.00	1.49	179.40	9,689.68	-583.98	775.63	970.71	0.33	0.27	8.05
9,921.00	1.49	176.15	9,784.64	-586.45	775.72	972.24	0.09	0.00	-3.42
10,016.00	1.99	173.34	9,879.60	-589.32	776.00	974.14	0.53	0.53	-2.96
10,111.00	2.11	173.07	9,974.54	-592.70	776.40	976.44	0.13	0.13	-0.28
10,206.00	2.29	176.50	10,069.47	-596.33	776.73	978.83	0.23	0.19	3.61
10,300.00	2.02	180.54	10,163.40	-599.86	776.83	980.98	0.33	-0.29	4.30
10,395.00	2.11	179.14	10,258.34	-603.28	776.84	983.00	0.11	0.09	-1.47
10,490.00	2.37	171.75	10,353.27	-606.97	777.14	985.41	0.41	0.27	-7.78
10,585.00	2.64	166.04	10,448.18	-611.04	777.95	988.45	0.39	0.28	-6.01
10,679.00	2.90	164.28	10,542.07	-615.43	779.12	991.97	0.29	0.28	-1.87
10,774.00	2.81	163.60	10,636.95	-619.98	780.43	995.69	0.10	-0.09	-0.72
10,869.00	2.81	159.80	10,731.84	-624.40	781.89	999.47	0.20	0.00	-4.00
10,963.00	2.90	160.77	10,825.72	-628.80	783.47	1,003.33	0.11	0.10	1.03
11,058.00	2.64	160.59	10,920.61	-633.14	784.99	1,007.10	0.27	-0.27	-0.19
11,153.00	2.55	161.12	11,015.51	-637.20	786.40	1,010.62	0.10	-0.09	0.56
11,248.00	2.55	158.57	11,110.42	-641.17	787.86	1,014.13	0.12	0.00	-2.68
11,342.00	2.46	156.46	11,204.33	-644.96	789.43	1,017.62	0.14	-0.10	-2.24
11,437.00	2.46	157.60	11,299.24	-648.72	791.02	1,021.11	0.05	0.00	1.20
11,532.00	2.37	160.68	11,394.16	-652.45	792.44	1,024.46	0.17	-0.09	3.24
11,627.00	2.29	161.30	11,489.08	-656.11	793.70	1,027.62	0.09	-0.08	0.65
LAST SDI MWD PRODUCTION SURVEY									
11,700.00	2.29	161.30	11,562.02	-658.87	794.64	1,029.99	0.00	0.00	0.00
SDI PROJECTION TO TD									

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
Well: NBU 921-18F1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
219.00	218.99	-1.30	0.39	FIRST SDI MWD SURFACE SURVEY
2,856.00	2,763.00	-367.40	508.14	LAST SDI MWD SURFACE SURVEY
2,944.00	2,847.16	-383.80	527.91	FIRST SDI MWD PRODUCTION SURVEY
11,627.00	11,489.08	-656.11	793.70	LAST SDI MWD PRODUCTION SURVEY
11,700.00	11,562.02	-658.87	794.64	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____



Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 921-18D PAD
NBU 921-18F1BS**

OH

Design: OH

Survey Report - Geographic

06 October, 2011





Local Co-ordinate Reference:	Well NBU 921-18F1BS
TVD Reference:	GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference:	GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference:	True
Survey Calculation Method:	Minimum Curvature
Database:	EDM5000-RobertS-Local

Site NBU 921-18D PAD, SECTION 18 T9S R21E				
Site Position:		Northing:	14,544,032.20	Latitude: 40° 2' 27.330 N
From:	Lat/Long	Easting:	2,032,611.30	Longitude: 109° 35' 55.622 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.90 °

Well	NBU 921-18F1BS, 878 FNL 1827 FVL			
Well Position	+N/-S	0.00 ft	Northing:	14,544,043.00 usft
	+E/-W	0.00 ft	Easting:	2,032,650.05 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
			Ground Level:	4,711.00 ft

Wellbore						OH
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2010	2011/09/23	11.09	65.88	52,312	

Design		OH		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	125.87

Survey Program		Date	2011/10/06	
From (R)	To (R)	Survey (Wellbore)	Tool Name	Description
15.00	2,856.00	Survey #1 SDI MWD SURFACE (OH)	MWD SDI	MWD - Standard ver 1.0.1
2,944.00	11,700.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,544,043.00	2,032,650.05	40° 2' 27.431 N	109° 35' 55.122 W
15.00	0.00	0.00	15.00	0.00	0.00	14,544,043.00	2,032,650.05	40° 2' 27.431 N	109° 35' 55.122 W
219.00	0.76	163.39	218.99	-1.30	0.39	14,544,041.71	2,032,650.45	40° 2' 27.418 N	109° 35' 55.117 W
FIRST SDI MWD SURFACE SURVEY									
304.00	1.31	111.61	303.98	-2.19	1.45	14,544,040.83	2,032,651.53	40° 2' 27.409 N	109° 35' 55.103 W
391.00	2.88	100.09	390.92	-2.94	4.53	14,544,040.13	2,032,654.62	40° 2' 27.402 N	109° 35' 55.064 W
481.00	3.77	106.77	480.77	-4.19	9.59	14,544,038.96	2,032,659.70	40° 2' 27.389 N	109° 35' 54.999 W
571.00	3.56	105.27	570.58	-5.78	15.12	14,544,037.46	2,032,665.25	40° 2' 27.374 N	109° 35' 54.928 W
661.00	4.53	108.10	660.36	-7.62	21.19	14,544,035.72	2,032,671.35	40° 2' 27.355 N	109° 35' 54.850 W
751.00	5.71	116.98	750.00	-10.76	28.56	14,544,032.70	2,032,678.77	40° 2' 27.324 N	109° 35' 54.755 W
841.00	7.11	124.77	839.44	-15.97	37.12	14,544,027.62	2,032,687.42	40° 2' 27.273 N	109° 35' 54.645 W

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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
931.00	8.83	127.51	928.56	-23.35	47.18	14,544,020.40	2,032,897.59	40° 2' 27.200 N	109° 35' 54.515 W
1,021.00	10.82	126.96	1,017.24	-32.64	59.41	14,544,011.31	2,032,709.96	40° 2' 27.108 N	109° 35' 54.358 W
1,111.00	12.53	123.75	1,105.38	-43.14	74.28	14,544,001.04	2,032,724.99	40° 2' 27.004 N	109° 35' 54.167 W
1,201.00	14.27	121.93	1,192.92	-54.43	91.81	14,543,990.02	2,032,742.70	40° 2' 26.893 N	109° 35' 53.941 W
1,291.00	15.57	125.24	1,279.89	-67.27	111.09	14,543,977.49	2,032,762.18	40° 2' 26.766 N	109° 35' 53.693 W
1,381.00	16.03	125.00	1,366.49	-81.37	131.14	14,543,963.71	2,032,782.45	40° 2' 26.627 N	109° 35' 53.436 W
1,471.00	16.24	125.29	1,452.94	-95.76	151.59	14,543,949.64	2,032,803.12	40° 2' 26.484 N	109° 35' 53.173 W
1,561.00	16.73	127.91	1,539.24	-110.99	172.08	14,543,934.73	2,032,823.85	40° 2' 26.334 N	109° 35' 52.909 W
1,651.00	17.07	128.46	1,625.36	-127.17	192.64	14,543,918.88	2,032,844.67	40° 2' 26.174 N	109° 35' 52.645 W
1,741.00	17.62	126.61	1,711.26	-143.51	213.92	14,543,902.88	2,032,866.20	40° 2' 26.012 N	109° 35' 52.371 W
1,831.00	18.18	125.92	1,796.91	-159.87	236.23	14,543,886.87	2,032,886.76	40° 2' 25.851 N	109° 35' 52.084 W
1,981.00	20.63	125.93	1,938.38	-189.11	276.58	14,543,858.28	2,032,929.57	40° 2' 25.562 N	109° 35' 51.565 W
2,011.00	20.69	124.89	1,966.45	-195.24	285.21	14,543,852.28	2,032,938.29	40° 2' 25.501 N	109° 35' 51.454 W
2,101.00	20.67	127.05	2,050.65	-213.90	310.93	14,543,834.02	2,032,964.30	40° 2' 25.316 N	109° 35' 51.124 W
2,191.00	20.84	127.10	2,134.81	-233.13	336.37	14,543,815.20	2,032,990.04	40° 2' 25.126 N	109° 35' 50.796 W
2,281.00	20.11	128.23	2,219.12	-252.36	361.30	14,543,796.36	2,033,015.27	40° 2' 24.936 N	109° 35' 50.476 W
2,371.00	19.08	128.45	2,303.91	-271.08	384.97	14,543,778.01	2,033,039.23	40° 2' 24.751 N	109° 35' 50.171 W
2,461.00	18.78	126.91	2,389.04	-288.93	408.07	14,543,760.53	2,033,062.61	40° 2' 24.575 N	109° 35' 49.874 W
2,551.00	18.94	126.05	2,474.21	-306.23	431.47	14,543,743.61	2,033,086.28	40° 2' 24.404 N	109° 35' 49.573 W
2,641.00	18.95	128.10	2,559.34	-323.84	454.78	14,543,726.36	2,033,109.86	40° 2' 24.230 N	109° 35' 49.274 W
2,731.00	19.06	129.70	2,644.43	-342.24	477.58	14,543,708.32	2,033,132.95	40° 2' 24.048 N	109° 35' 48.980 W
2,821.00	18.30	129.18	2,729.69	-360.56	499.84	14,543,690.36	2,033,155.50	40° 2' 23.867 N	109° 35' 48.694 W
2,856.00	17.49	129.80	2,763.00	-367.40	508.14	14,543,683.65	2,033,163.90	40° 2' 23.799 N	109° 35' 48.587 W
LAST SDI MWD SURFACE SURVEY									
2,944.00	16.45	129.55	2,847.16	-383.80	527.91	14,543,667.57	2,033,183.93	40° 2' 23.637 N	109° 35' 48.333 W
FIRST SDI MWD PRODUCTION SURVEY									
3,089.00	17.41	128.60	2,985.88	-410.40	560.69	14,543,641.48	2,033,217.13	40° 2' 23.374 N	109° 35' 47.912 W
3,184.00	17.50	125.00	3,076.51	-427.46	583.50	14,543,624.78	2,033,240.20	40° 2' 23.205 N	109° 35' 47.618 W
3,279.00	17.67	126.67	3,167.07	-444.27	606.77	14,543,608.34	2,033,263.73	40° 2' 23.039 N	109° 35' 47.319 W
3,373.00	16.14	122.90	3,257.01	-459.88	629.18	14,543,593.08	2,033,286.38	40° 2' 22.885 N	109° 35' 47.031 W
3,468.00	16.36	126.40	3,348.21	-475.00	651.04	14,543,578.31	2,033,308.48	40° 2' 22.736 N	109° 35' 46.750 W
3,563.00	16.80	126.58	3,439.26	-491.12	672.83	14,543,562.54	2,033,330.52	40° 2' 22.576 N	109° 35' 46.470 W
3,658.00	14.25	125.88	3,530.79	-506.15	693.33	14,543,547.83	2,033,351.26	40° 2' 22.428 N	109° 35' 46.206 W
3,753.00	12.25	124.17	3,623.26	-518.67	711.15	14,543,535.59	2,033,369.27	40° 2' 22.304 N	109° 35' 45.977 W
3,848.00	10.38	121.45	3,716.41	-528.80	726.79	14,543,525.71	2,033,385.06	40° 2' 22.204 N	109° 35' 45.776 W
3,943.00	9.06	126.82	3,810.04	-537.74	740.08	14,543,516.97	2,033,398.49	40° 2' 22.115 N	109° 35' 45.605 W
4,037.00	6.87	124.41	3,903.13	-545.36	750.64	14,543,509.53	2,033,409.18	40° 2' 22.040 N	109° 35' 45.469 W
4,132.00	6.02	134.77	3,997.53	-552.08	758.87	14,543,502.94	2,033,417.51	40° 2' 21.974 N	109° 35' 45.363 W
4,227.00	4.84	137.04	4,092.10	-558.52	765.14	14,543,496.60	2,033,423.87	40° 2' 21.910 N	109° 35' 45.283 W
4,322.00	3.43	143.01	4,186.85	-563.72	769.58	14,543,491.46	2,033,428.40	40° 2' 21.859 N	109° 35' 45.226 W
4,417.00	1.58	156.99	4,281.76	-567.20	771.80	14,543,488.02	2,033,430.67	40° 2' 21.824 N	109° 35' 45.197 W
4,512.00	0.79	173.69	4,376.74	-569.05	772.38	14,543,486.18	2,033,431.29	40° 2' 21.806 N	109° 35' 45.189 W
4,606.00	1.14	166.30	4,470.73	-570.61	772.68	14,543,484.63	2,033,431.60	40° 2' 21.790 N	109° 35' 45.186 W
4,701.00	0.53	217.19	4,565.72	-571.87	772.63	14,543,483.36	2,033,431.58	40° 2' 21.778 N	109° 35' 45.186 W
4,796.00	1.06	191.88	4,660.71	-573.08	772.19	14,543,482.14	2,033,431.15	40° 2' 21.766 N	109° 35' 45.192 W
4,891.00	1.49	186.34	4,755.68	-575.17	771.87	14,543,480.05	2,033,430.87	40° 2' 21.745 N	109° 35' 45.196 W
4,986.00	1.58	202.25	4,850.65	-577.61	771.24	14,543,477.60	2,033,430.28	40° 2' 21.721 N	109° 35' 45.204 W
5,080.00	1.67	197.95	4,944.61	-580.11	770.32	14,543,475.09	2,033,429.40	40° 2' 21.696 N	109° 35' 45.216 W
5,175.00	2.07	185.68	5,039.56	-583.14	769.73	14,543,472.05	2,033,428.85	40° 2' 21.667 N	109° 35' 45.224 W
5,271.00	1.93	186.52	5,135.50	-586.47	769.37	14,543,468.72	2,033,428.55	40° 2' 21.634 N	109° 35' 45.228 W
5,366.00	1.32	201.37	5,230.46	-589.08	768.79	14,543,466.10	2,033,428.01	40° 2' 21.608 N	109° 35' 45.236 W
5,461.00	0.53	245.14	5,325.45	-590.28	768.00	14,543,464.88	2,033,427.23	40° 2' 21.596 N	109° 35' 45.246 W
5,556.00	0.79	346.48	5,420.45	-589.83	767.44	14,543,465.33	2,033,426.67	40° 2' 21.600 N	109° 35' 45.253 W
5,651.00	2.37	348.59	5,515.41	-587.27	766.90	14,543,467.88	2,033,426.09	40° 2' 21.626 N	109° 35' 45.260 W
5,746.00	1.76	346.83	5,610.35	-583.92	766.18	14,543,471.21	2,033,425.32	40° 2' 21.659 N	109° 35' 45.269 W

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
Well: NBU 921-18F1BS
Wellbore: OH
Design: OH

Local Co-ordinates Reference: Well NBU 921-18F1BS
TVD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
MD Reference: GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (feet)	Map Easting (feet)	Latitude	Longitude
5,841.00	1.77	338.72	5,705.30	-581.13	765.32	14,543,473.99	2,033,424.41	40° 2' 21.686 N	109° 35' 45.280 W
5,936.00	1.41	337.16	5,800.27	-578.69	764.33	14,543,476.42	2,033,423.39	40° 2' 21.711 N	109° 35' 45.293 W
6,031.00	1.23	329.69	5,895.24	-576.73	763.36	14,543,478.36	2,033,422.39	40° 2' 21.730 N	109° 35' 45.305 W
6,126.00	1.06	337.69	5,990.22	-575.04	762.51	14,543,480.04	2,033,421.51	40° 2' 21.747 N	109° 35' 45.316 W
6,220.00	0.88	318.97	6,084.21	-573.69	761.71	14,543,481.37	2,033,420.69	40° 2' 21.760 N	109° 35' 45.327 W
6,315.00	0.44	289.26	6,179.20	-573.02	760.89	14,543,482.03	2,033,419.85	40° 2' 21.767 N	109° 35' 45.337 W
6,410.00	0.62	345.69	6,274.20	-572.40	760.41	14,543,482.64	2,033,419.37	40° 2' 21.773 N	109° 35' 45.343 W
6,505.00	0.33	276.82	6,369.20	-571.87	760.02	14,543,483.17	2,033,418.97	40° 2' 21.778 N	109° 35' 45.349 W
6,599.00	0.18	280.56	6,463.19	-571.81	759.60	14,543,483.22	2,033,418.55	40° 2' 21.779 N	109° 35' 45.354 W
6,694.00	0.70	232.84	6,558.19	-572.13	758.99	14,543,482.89	2,033,417.95	40° 2' 21.775 N	109° 35' 45.362 W
6,789.00	0.70	195.57	6,653.19	-573.04	758.37	14,543,481.97	2,033,417.34	40° 2' 21.766 N	109° 35' 45.370 W
6,884.00	0.88	196.63	6,748.18	-574.30	758.01	14,543,480.70	2,033,417.00	40° 2' 21.754 N	109° 35' 45.374 W
6,979.00	0.97	193.99	6,843.16	-575.78	757.61	14,543,479.22	2,033,416.62	40° 2' 21.739 N	109° 35' 45.379 W
7,073.00	0.75	200.34	6,937.15	-577.13	757.20	14,543,477.86	2,033,416.23	40° 2' 21.726 N	109° 35' 45.385 W
7,169.00	0.97	175.88	7,033.14	-578.53	757.04	14,543,476.46	2,033,416.10	40° 2' 21.712 N	109° 35' 45.387 W
7,263.00	1.32	187.13	7,127.12	-580.40	756.96	14,543,474.59	2,033,416.05	40° 2' 21.694 N	109° 35' 45.388 W
7,359.00	1.20	167.61	7,223.10	-582.48	757.04	14,543,472.51	2,033,416.16	40° 2' 21.673 N	109° 35' 45.387 W
7,453.00	1.23	187.05	7,317.08	-584.44	757.13	14,543,470.55	2,033,416.28	40° 2' 21.654 N	109° 35' 45.386 W
7,548.00	1.14	180.37	7,412.06	-586.40	757.00	14,543,468.59	2,033,416.18	40° 2' 21.634 N	109° 35' 45.387 W
7,643.00	0.18	210.95	7,507.05	-587.47	756.92	14,543,467.52	2,033,416.11	40° 2' 21.624 N	109° 35' 45.388 W
7,738.00	0.70	41.15	7,602.05	-587.16	757.22	14,543,467.83	2,033,416.41	40° 2' 21.627 N	109° 35' 45.384 W
7,832.00	1.32	16.01	7,696.04	-585.69	757.90	14,543,469.32	2,033,417.06	40° 2' 21.641 N	109° 35' 45.376 W
7,927.00	1.58	19.26	7,791.01	-583.40	758.63	14,543,471.62	2,033,417.76	40° 2' 21.664 N	109° 35' 45.366 W
8,022.00	1.49	19.62	7,885.97	-581.00	759.48	14,543,474.03	2,033,418.57	40° 2' 21.688 N	109° 35' 45.355 W
8,117.00	1.23	22.25	7,980.94	-578.89	760.28	14,543,476.15	2,033,419.34	40° 2' 21.709 N	109° 35' 45.345 W
8,212.00	1.06	3.97	8,075.93	-577.07	760.73	14,543,477.98	2,033,419.76	40° 2' 21.727 N	109° 35' 45.339 W
8,307.00	0.79	24.27	8,170.91	-575.60	761.06	14,543,479.46	2,033,420.06	40° 2' 21.741 N	109° 35' 45.335 W
8,402.00	0.70	23.57	8,265.91	-574.47	761.56	14,543,480.59	2,033,420.55	40° 2' 21.752 N	109° 35' 45.329 W
8,496.00	0.44	18.21	8,359.90	-573.60	761.90	14,543,481.47	2,033,420.88	40° 2' 21.761 N	109° 35' 45.324 W
8,591.00	0.79	21.37	8,454.90	-572.64	762.25	14,543,482.43	2,033,421.21	40° 2' 21.770 N	109° 35' 45.320 W
8,686.00	0.62	56.35	8,549.89	-571.75	762.92	14,543,483.33	2,033,421.86	40° 2' 21.779 N	109° 35' 45.311 W
8,781.00	0.62	90.37	8,644.88	-571.47	763.86	14,543,483.63	2,033,422.80	40° 2' 21.782 N	109° 35' 45.299 W
8,876.00	0.35	57.58	8,739.88	-571.32	764.62	14,543,483.79	2,033,423.56	40° 2' 21.783 N	109° 35' 45.289 W
8,971.00	0.70	116.91	8,834.88	-571.42	765.38	14,543,483.70	2,033,424.32	40° 2' 21.782 N	109° 35' 45.280 W
9,066.00	0.79	117.00	8,929.87	-571.98	766.48	14,543,483.16	2,033,425.43	40° 2' 21.777 N	109° 35' 45.265 W
9,162.00	0.70	104.96	9,025.86	-572.43	767.64	14,543,482.72	2,033,426.60	40° 2' 21.772 N	109° 35' 45.250 W
9,257.00	0.88	112.69	9,120.85	-572.87	768.87	14,543,482.31	2,033,427.84	40° 2' 21.768 N	109° 35' 45.235 W
9,352.00	1.32	121.22	9,215.83	-573.71	770.48	14,543,481.49	2,033,429.46	40° 2' 21.760 N	109° 35' 45.214 W
9,446.00	1.32	129.04	9,309.81	-574.96	772.25	14,543,480.27	2,033,431.24	40° 2' 21.747 N	109° 35' 45.191 W
9,541.00	1.54	146.30	9,404.78	-576.71	773.81	14,543,478.55	2,033,432.83	40° 2' 21.730 N	109° 35' 45.171 W
9,636.00	1.85	164.72	9,499.74	-579.25	774.92	14,543,476.02	2,033,433.98	40° 2' 21.705 N	109° 35' 45.157 W
9,731.00	1.23	171.75	9,594.70	-581.74	775.47	14,543,473.54	2,033,434.57	40° 2' 21.680 N	109° 35' 45.150 W
9,826.00	1.49	179.40	9,689.68	-583.98	775.63	14,543,471.30	2,033,434.77	40° 2' 21.658 N	109° 35' 45.148 W
9,921.00	1.49	176.15	9,784.64	-586.45	775.72	14,543,468.84	2,033,434.90	40° 2' 21.634 N	109° 35' 45.147 W
10,016.00	1.99	173.34	9,879.60	-589.32	776.00	14,543,465.97	2,033,435.22	40° 2' 21.605 N	109° 35' 45.143 W
10,111.00	2.11	173.07	9,974.54	-592.70	776.40	14,543,462.60	2,033,435.68	40° 2' 21.572 N	109° 35' 45.138 W
10,206.00	2.29	176.50	10,069.47	-596.33	776.73	14,543,458.98	2,033,436.06	40° 2' 21.536 N	109° 35' 45.134 W
10,300.00	2.02	180.54	10,163.40	-599.86	776.83	14,543,455.45	2,033,436.21	40° 2' 21.501 N	109° 35' 45.132 W
10,395.00	2.11	179.14	10,258.34	-603.28	776.84	14,543,452.03	2,033,436.28	40° 2' 21.467 N	109° 35' 45.132 W
10,490.00	2.37	171.75	10,353.27	-606.97	777.14	14,543,448.34	2,033,436.64	40° 2' 21.431 N	109° 35' 45.128 W
10,585.00	2.64	166.04	10,448.18	-611.04	777.95	14,543,444.28	2,033,437.52	40° 2' 21.391 N	109° 35' 45.118 W
10,679.00	2.90	164.28	10,542.07	-615.43	779.12	14,543,439.91	2,033,438.75	40° 2' 21.347 N	109° 35' 45.103 W
10,774.00	2.81	163.60	10,636.95	-619.98	780.43	14,543,435.39	2,033,440.13	40° 2' 21.302 N	109° 35' 45.086 W
10,869.00	2.81	159.80	10,731.84	-624.40	781.89	14,543,430.99	2,033,441.66	40° 2' 21.259 N	109° 35' 45.067 W
10,963.00	2.90	160.77	10,825.72	-628.80	783.47	14,543,426.61	2,033,443.31	40° 2' 21.215 N	109° 35' 45.047 W

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 921-18D PAD
Well: NBU 921-18F1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well NBU 921-18F1BS
 GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
 GL 4711' & KB 19' @ 4730.00ft (PIONEER 54)
 True
 Minimum Curvature
 EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,058.00	2.64	160.59	10,920.61	-633.14	784.99	14,543,422.30	2,033,444.90	40° 2' 21.172 N	109° 35' 45.027 W
11,153.00	2.55	161.12	11,015.51	-637.20	786.40	14,543,418.26	2,033,446.37	40° 2' 21.132 N	109° 35' 45.009 W
11,248.00	2.55	158.57	11,110.42	-641.17	787.86	14,543,414.32	2,033,447.89	40° 2' 21.093 N	109° 35' 44.991 W
11,342.00	2.46	156.46	11,204.33	-644.96	789.43	14,543,410.55	2,033,449.52	40° 2' 21.055 N	109° 35' 44.970 W
11,437.00	2.46	157.60	11,299.24	-648.72	791.02	14,543,406.82	2,033,451.17	40° 2' 21.018 N	109° 35' 44.950 W
11,532.00	2.37	160.68	11,394.16	-652.45	792.44	14,543,403.10	2,033,452.66	40° 2' 20.981 N	109° 35' 44.932 W
11,627.00	2.29	161.30	11,489.08	-656.11	793.70	14,543,399.47	2,033,453.97	40° 2' 20.945 N	109° 35' 44.915 W
LAST SDI MWD PRODUCTION SURVEY									
11,700.00	2.29	161.30	11,562.02	-658.87	794.64	14,543,396.72	2,033,454.95	40° 2' 20.918 N	109° 35' 44.903 W
SDI PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
219.00	218.99	-1.30	0.39	FIRST SDI MWD SURFACE SURVEY
2,856.00	2,763.00	-367.40	508.14	LAST SDI MWD SURFACE SURVEY
2,944.00	2,847.16	-383.80	527.91	FIRST SDI MWD PRODUCTION SURVEY
11,627.00	11,489.08	-656.11	793.70	LAST SDI MWD PRODUCTION SURVEY
11,700.00	11,562.02	-658.87	794.64	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____